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# DURUM WHEAT

PROCUREMENT SECTION  
CURRENT SERIAL RECORDS



## QUALITY REPORT

Physical, Chemical, Milling, and Macaroni Characteristics

1971 CROP

UNITED STATES DEPARTMENT OF AGRICULTURE

US AGRICULTURAL RESEARCH SERVICE

Plant Science Research Division

and

NORTH DAKOTA AGRICULTURAL EXPERIMENT STATION

DEPARTMENT OF CEREAL TECHNOLOGY





UNITED STATES DEPARTMENT OF AGRICULTURE  
AGRICULTURAL RESEARCH SERVICE  
PLANT SCIENCE RESEARCH DIVISION  
in cooperation with  
STATE AGRICULTURAL EXPERIMENT STATIONS

QUALITY EVALUATION OF DURUM WHEAT VARIETIES

1971 CROP<sup>1/</sup>

by

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K. J. Sprick, Chemist; R. D. Crawford, R. D. Maneval, and N. B. Lofthus,  
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<u>Contents</u>	<u>Page</u>
Cooperating Agencies, Stations, and Personnel . . . . .	2
Introduction. . . . .	3
Source of the Samples . . . . .	4
Table of Varieties and Crosses. . . . .	5
Methods . . . . .	6
Flow Diagram for Large Durum Wheat Samples. . . . .	11
Flow Diagram for Small Durum Wheat Samples. . . . .	12
Experimental Results. . . . .	13
Advanced Yield Nursery Samples. . . . .	13
Field Plot Nursery Samples. . . . .	14
International Yield Nursery Samples . . . . .	15
Preliminary Yield Nursery Samples . . . . .	15
Special Nursery Samples . . . . .	15
Uniform Regional Nursery Samples. . . . .	17
Tables - No. 1 through No. 30	

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<sup>1/</sup> This is a progress report of cooperative investigations containing some results that have not been sufficiently confirmed to justify general release; interpretations may be modified with additional experimentation. Confirmed results will be published through established channels. The report is primarily a tool for use of cooperators and their official staffs and to those persons having direct and special interest in the development of agricultural research programs.

This report was compiled in the Plant Science Research Division, Agricultural Research Service, U.S. Department of Agriculture. Special acknowledgment is made to the North Dakota State University for their facilities and services provided in support of these studies. The report is not intended for publication and should not be referred to in literature citations or quoted in publicity or advertising. Use of the data may be granted for certain purposes upon written request to the agency or agencies involved.

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Hard Red Spring and Durum Wheat Quality Laboratory  
Fargo, North Dakota  
PSR-37-72



UNITED STATES DEPARTMENT OF AGRICULTURE  
 AGRICULTURAL RESEARCH SERVICE  
 PLANT SCIENCE RESEARCH DIVISION  
 IN COOPERATION WITH  
 STATE AGRICULTURAL EXPERIMENT STATIONS  
 QUALITY EVALUATION OF DURUM WHEAT VARIETIES

1971 Catalog

by

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 Department of Cereal Chemistry and Technology, North Dakota Agricultural  
 Experiment Station.

Page	Contents
1	Cooperating Agencies, Stations, and Personnel
2	Introduction
3	Scope of the Samples
4	Table of Varieties and Crosses
5	Methods
6	Flow Diagram for Large Durum Wheat Samples
11	Flow Diagram for Small Durum Wheat Samples
12	Experimental Results
13	Advanced Field Nursery Samples
14	Field Plot Nursery Samples
15	International Field Nursery Samples
16	Preliminary Field Nursery Samples
17	Special Nursery Samples
18	Global Regional Nursery Samples
	Tables - No. 1 through No. 30

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Hard Red Spring and Durum Wheat Quality Laboratory  
 Fargo, North Dakota  
 PSR-37-72

## COOPERATING AGENCIES, STATIONS, AND PERSONNEL

The cooperating agencies, stations, and personnel conducting the varietal plot and nursery experiments concerned with these durum tests in 1971 were as follows:

### California Agricultural Experiment Station:

Davis, El Centro, Isleton, and Tulelake: Y. P. Puri and  
C. O. Qualset

### Idaho Agricultural Experiment Station:

Aberdeen: D. W. Sunderman\*

### Minnesota Agricultural Experiment Station:

Crookston, Morris, and St. Paul: R. E. Heiner\*,  
F. A. Elsayed, L. S. Smith, and D. D. Warnes

### Montana Agricultural Experiment Station:

Bozeman, Creston, Havre, Moccasin and Sidney:  
F. H. McNeal\*, M. A. Berg\*, R. T. Harada, and G. P. Hartman

### North Dakota Agricultural Experiment Station:

Carrington, Fargo, and Langdon: L. Joppa\*, H. Olson, and  
J. Quick

### South Dakota Agricultural Experiment Station:

Eureka, and Watertown: D. G. Wells, Q. Kingsley,  
G. Bucheneau, J. J. Bonneman, and A. Dittman.

### Washington State University:

Ellensburg, Pullman, and Royal Slope: C. F. Konzak,  
M. A. Davis, and E. Donaldson.

\* ARS Employees







## INTRODUCTION

This, the tenth annual Durum Wheat Quality Report, is for the 1971 crop. Samples of standard varieties and new strains of durum wheat grown in cooperative experiments in the durum wheat region of the United States<sup>2/</sup> were milled and evaluated by the Hard Red Spring and Durum Wheat Quality Laboratory in cooperation with the Department of Cereal Chemistry and Technology on the campus of North Dakota State University at Fargo, North Dakota. The evaluation of the field plot and some advanced durum wheats is integrated with the work done by the Department of Cereal Chemistry and Technology of North Dakota State University. Methods and techniques are described in detail in the text of the report.

Where sufficient quantity of sample was available, the semolina was processed into spaghetti to determine the quality characteristics. When the quantity was insufficient or the dry slick color was sufficiently poor, only the dry slick test was employed. In previous years the mixogram or farinogram value was given for the samples tested. However, because the test was time consuming and of little consequence in the outcome of the general evaluation, it was abandoned.

The purpose of this report is to make available to cooperators the quality data on standard varieties and new strains of durum wheat from the 1971 crop.

The relatively new procedures adopted in this report are more fully described under the Milling, Color Score, Dry Slick Color Score, Spaghetti Processing, and Tenderness Score in the Methods Section. A statistical study of the results, comparing the dry slick method and other established evaluation methods was given in the section of Statistical Study of the Dry Slick Color Score in the 1963 Report (CR-59-64). A new method, using a Buhler<sup>3/</sup> experimental mill and two Miag<sup>3/</sup> laboratory purifiers, was employed to process the macro samples of durum wheat last year. The same procedure was used this year, however, the clothing on the break scalps was replaced.

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<sup>2/</sup> Heiner, R.E. "Results on Spring Wheat Varieties Grown in Cooperative Plot and Nursery Experiments in the Spring Wheat Region in 1971." Plant Science Research Division, ARS, USDA, PSR-3-72.

<sup>3/</sup> Mention of a trademark name or proprietary product does not constitute a guarantee or warranty of the product by the U.S. Department of Agriculture, and does not imply its approval to the exclusion of other products that may also be suitable.







## SOURCE OF THE SAMPLES

Six hundred and seventy-six samples were received from twenty-one stations in seven states--California, Idaho, Minnesota, Montana, North Dakota, South Dakota, and Washington--for durum wheat quality tests. Approximately 10% of the samples tested were the named commercial varieties of Hercules, Lakota, Leeds, Rolette, Sentry, Wandell, Wascana, and Wells. The remaining samples were either new varieties or samples received from a special test for quality evaluation.

Thirty-nine Advanced Yield Nursery samples were received: fifteen from one station in Idaho (Aberdeen - irrigated plot); fourteen from five stations in Montana (Bozeman, Creston, Havre, Moccasin, and Sidney); and ten from one station in Washington (Royal Slope).

Forty-seven Field Plot samples were received: seventeen samples from two stations in California (Isleton and Tulelake); and thirty samples from one station in North Dakota (Carrington - dryland and irrigated plots).

Thirty-two samples were received from the International Yield Nursery at two locations: eight from the Davis, California station, and twenty-four from the Pullman, Washington station.

Seventy-two Preliminary Yield Nursery Trials were received from Ellensburg and Royal Slope, Washington.

Three hundred and twenty-two Special Nursery samples were received from El Centro and Tulelake, California; and Pullman and Royal Slope, Washington.

One hundred and sixty-four samples were Uniform Regional Nursery samples grown at the Crookston, Morris, and St. Paul, Minnesota stations; Fargo and Langdon, North Dakota stations; Eureka and Watertown, South Dakota stations; and Pullman, Washington station. As last year, no samples were received from Montana.

The durum wheats which are included in the Uniform Regional Nursery 1971 Trials are listed on Page 5. The cross or variety, the C.I. number or state selection number, and the station which developed the variety are given.





UNIFORM REGIONAL DURUM NURSERY

Entry No.	Cross or Variety	C.I. or Sel. No.	Year Entered	Source
1	MINDUM	5296	1929	Minnesota
2	WELLS	13333	1957	USDA-N.Dak.
3	LEEDS	13768	1963	"
4	HERCULES	DT191	1966	Canada
5	WASCANA	DT317	1968	"
6	ROLETTE	D6517	"	USDA-N. Dak.
7	61130/LDS	D6647**	1969	"
8	6062/6142	D6674	"	"
9	"	D6676	"	"
10	"	D6721	1970	"
11	"	D6722	"	"
12	"	D6723	"	"
13	Ldn*2/St464//Lds	D6714	"	"
14	"	D6715	"	"
15	Lds//Lk*Ldn	D6718	"	"
16	561/Lds	D6733	"	"
17	Lds/RL3601	D6761	"	"
18	RL3601//RL3442/Lk	DT327	1971	Canada
19	61130/Lds//6468	D6838**	"	USDA-N. Dak.
20	61130/Lds//Lds	D6876**	"	"

\*\* Semidwarfs





## METHODS

The methods used in the testing of the samples were essentially the same as given in last year's report, with the addition of some new tests and interpretations of the tests, as well as deletions.

Briefly, the following methods and terminologies were applied:

Test Weight Per Bushel - The weight per Winchester bushel of dockage-free wheat.

Thousand Kernel Weight - The 1000 kernel weight was determined by counting the number kernels in a 10 g. sample of cleaned, picked wheat on an Asco Seed Counter<sup>3/</sup>.

Kernel Size - The percentage of the size of the kernels (large, medium, and small) was determined on a wheat sizer as described by Shuey<sup>4/</sup>.

The sieves of the sizer were clothed as follows:

Top Sieve	- Tyler # 7 with 2.92 mm. opening
Middle Sieve	- Tyler # 9 with 2.24 mm. opening
Bottom Sieve	- Tyler #12 with 1.65 mm. opening

Milling - The samples were cleaned by passing the wheat over an Emerson Kicker and Dockage Tester<sup>3/</sup> and through a modified Forster Scourer Model 6 <sup>3/</sup>. The clean dry samples were pre-tempered to 12.5% for at least 72 hours prior to any additional tempering before milling.

The field plot and large advanced yield nursery samples were milled on a Buhler<sup>3/</sup> experimental mill specially designed for milling durum wheat. The mill is equipped with corrugated rolls throughout and the semolina purified on a Miag<sup>3/</sup> laboratory purifier. All of the stock is handled pneumatically. A flow diagram for the mill is shown on Page 11. The clean dry wheat was tempered in three stages: first to 12.5% moisture at least 72 hours prior to the second stage which is to add an additional 2.0% for 18 hours to give a cumulative moisture of 14.5%, then a final temper of 3.0%, 45 minutes prior to milling.

The other samples were milled on a modified Brabender Quadrumat Jr.<sup>3/</sup> Mill. The #2 roll with 13 corrugations per inch is replaced with #1 roll with 26 corrugations per inch. The #3 and #4 rolls are

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<sup>4/</sup> Shuey, William C. A Wheat Sizing Technique for Predicting Flour Milling Yield. Cereal Science Today 5: 71-72,75 (1960).

The first part of the paper discusses the importance of the study and the objectives of the research. It then proceeds to a detailed description of the methodology used, including the selection of participants and the procedures followed. The results of the study are presented in the following section, followed by a discussion of the findings and their implications. The paper concludes with a summary of the main points and a list of references.

The study was conducted in a laboratory setting, and the participants were all students of the University of [Name]. The sample size was 30, and the data were collected over a period of six weeks. The results show that there is a significant difference between the two groups, and this difference is maintained throughout the study. The implications of these findings are discussed in detail, and it is concluded that the study has provided valuable information on the topic.

The methodology used in this study was a combination of qualitative and quantitative methods. The qualitative methods included interviews and focus groups, while the quantitative methods included surveys and experiments. The data were analyzed using statistical software, and the results were presented in a clear and concise manner. The study was designed to be replicable, and the procedures were described in detail to allow other researchers to follow the same path.

The findings of the study are consistent with previous research, and they provide a new perspective on the issue. The implications of these findings are far-reaching, and they have the potential to influence policy and practice in the field. The study has also identified some limitations, and these are discussed in the conclusion. Overall, the study has been a success, and it has provided a wealth of information on the topic.



replaced with #2 rolls. The pre-tempered wheat is tempered overnight to 15.5% moisture content before milling. The ground meal is sifted for seven seconds on a Roto-matic<sup>3/</sup> sifter equipped with 30 W and 100 W sieves. The overs of the 30 W is bran, the thrus of the 100 W is flour, and the middle cut-over 100 W and thru 30 W is the unpurified semolina. The purified semolina is obtained by introducing unpurified semolina into Purifier #1 of the Buhler<sup>3/</sup> Mill flow (Page 12), but the tailings for Purifier #1 are not recycled. This material is used in testing the quality of semolina.

Protein Content - The protein was calculated by multiplying by the factor of 5.7, the percent nitrogen, as determined by the standard Kjeldahl procedure.

Mineral Content or Ash Content - This was determined by measuring the residue of the minerals left after incinerating the sample for approximately 16 hours at 600°C. The results were reported as percentage of the sample which was incinerated.

Absorption - This was the water, expressed as percent of the semolina, required to bring the dough to the proper consistency.

All values (protein, ash, absorption) are reported on a 14% moisture basis.

MACRO Spaghetti Processing - Spaghetti was processed on a semi-commercial scale pasta extruder (DEMACO)<sup>3/</sup>. The control as well as sprouted durum was processed with the following extruding conditions:

Temperature . . . . 49.5°C.  
Rate . . . . . 12 r.p.m.  
Absorption . . . . . 30%  
Vacuum . . . . . 18 in. Hg

These were the optimum conditions for processing spaghetti, which were calculated by the linear programming technique.

To process the pasta, 1000 g. batch<sup>5/</sup> was premixed by slowly adding the water and mixing at slow speed for approximately 30 seconds, and high speed for 10 seconds, then add the remainder of the water at slow speed in a Hobart C-100-T<sup>3/</sup> mixer equipped with a Pastry Knife Agitator. After all of the water has been added, the semolina and water are blended at high speed for 30 seconds; the mixer was stopped to scrape down the sides of the bowl and the blending

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5/ Weight was determined as follows:

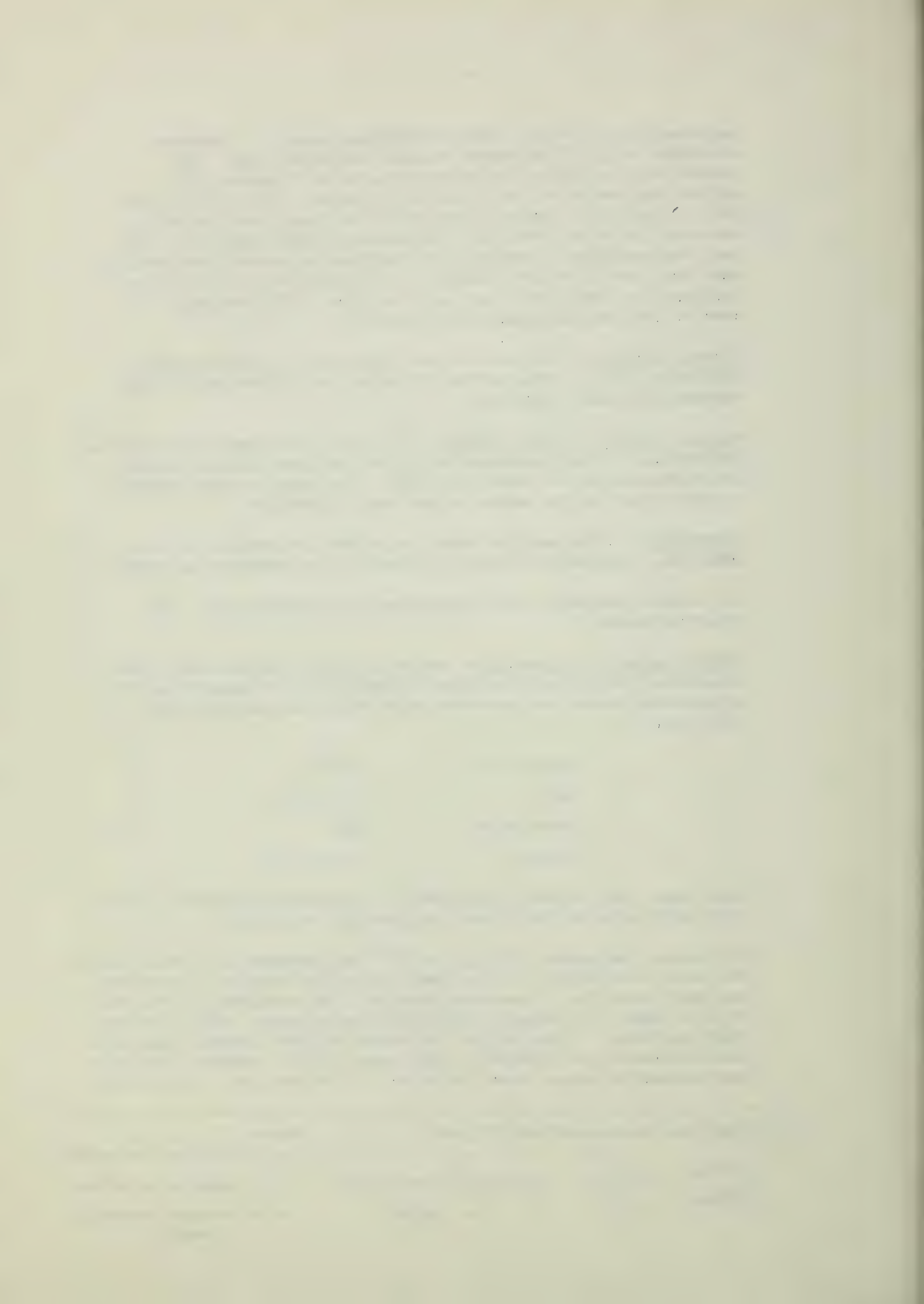
$$\left( \frac{100-m_1}{100-m_2} - 1 \right) \left[ W - W (m_2-m_1) \right] = \text{Amount } H_2O \text{ added}$$

where:

$m_1$  = original moisture

$m_2$  = desired moisture

$W$  = desired amount of sample





continued for 90 seconds more to complete the premix stage. The premixed pasta was then transferred to the vacuum mixer of the press and extruded through an 84-strand 0.043 inch teflon spaghetti die. A jacketed extension tube (9 $\frac{1}{4}$ " long x 1-3/4" inside diameter) was attached to the semi-commercial pasta extruder to allow more time for hydration of the semolina and minimize the number of white specks (unhydrated semolina) in the spaghetti. Extrusion temperature was controlled by a circulating water bath.

MICRO Spaghetti Processing - Thirty grams of semolina were mixed with water to form a stiff dough, pressed into spaghetti and dried. The equipment and procedure have been described by Harris and Sibbitt<sup>6/</sup> and Fifield<sup>7/</sup>.

Spaghetti Drying - Spaghetti was dried in an experimental pasta dryer for an 18 hour cycle as described by Gilles, Sibbitt, and Shuey<sup>8/</sup>. During the drying period, the humidity of the dryer was decreased linearly from 95% to 60% R.H. and the temperature was held constant at 100°F.

Color Score - The color of the spaghetti or semolina has been generally accepted as the most important single grading factor. A deep amber or golden color is the most preferable. The amount of yellow pigmentation determines the extent or degree of amber-ness.

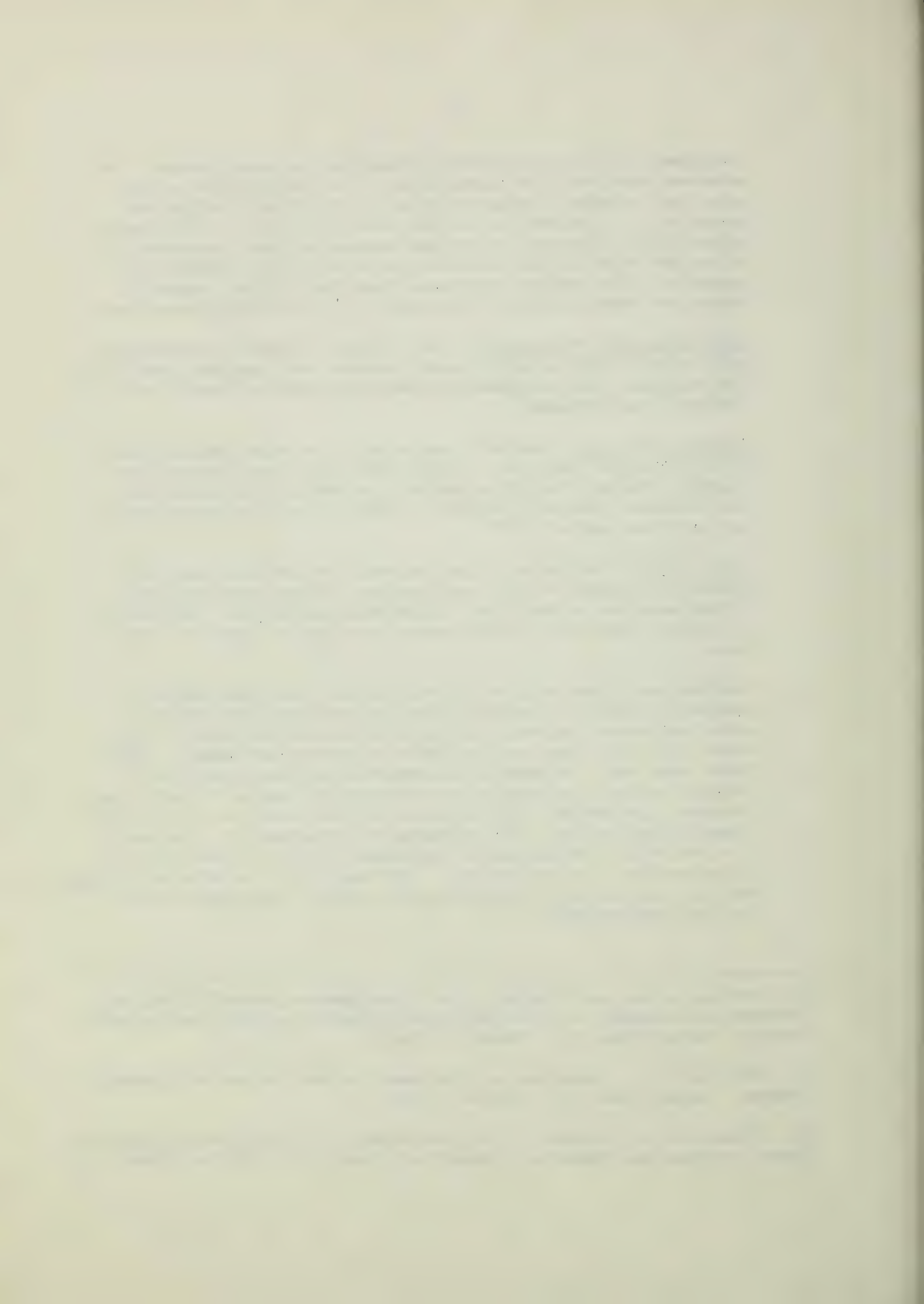
Samples which have a color rating 2 points below the standard spaghetti score or 10 points below the standard slick color score are unsatisfactory. It is possible that the average color score for a crop year may be higher or lower than average, therefore, this would be taken into consideration when giving the overall rating of a variety over a number of years. A sample may receive a low rating for reasons other than a deficiency of yellow pigmentation such as: D - Dullness; G - Grayness; R - Redness; B - Branny; W - White Cast or Chalkiness; and S - Speckiness, or a combination of these factors. The sample will be rated accordingly with the exception of the intensity, quantity, and depth of the yellow pigmentation.

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6/ Harris, R. H., and Sibbitt, L. D. Experimental Durum Milling and Processing Equipment with Further Quality Studies on North Dakota Durum Wheats. Cereal Chem. 19: 388-402 (1942).

7/ Fifield, C. C. Experimental Equipment for Manufacture of Alimentary Pastes. Cereal Chem. 11: 330-334 (1934).

8/ Gilles, K. A., Sibbitt, L. D., and Shuey, W. C. Automatic Laboratory Dryer for Macaroni Products. Cereal Sci. Today 11: 322-324 (1966).





The following grading system has been adopted for scoring the color of spaghetti and semolina relative to the standard color score:

COLOR SCORE

<u>Spaghetti</u>	<u>Dry Slick</u>	<u>Description</u>
2.0 above	10 above	Much deeper and intense yellow pigmentation than standard.
1.0 above	5 above	Deeper and more intense yellow pigmentation than standard.
Equal to Standard	Equal to Standard	Standard quality, depth, and intensity of yellow pigmentation.
0.5 below	2 below	Slightly less depth and intensity, but sufficient quantity of pigmentation.
1.0 below	5 below	Slightly less quantity as well as depth and intensity of pigmentation than the standard, but still sufficient to be rated satisfactory on the basis of color.
2.0 below	10 below	Sufficiently less quantity of yellow pigmentation than the standard to give a pale yellow color and graded unsatisfactory for color score.

The numerical rating describes the depth or amount of pigmentation. In cases where a sample is graded down because of off-color, speckiness, etc., the designation is shown by a letter abbreviation following the numerical score. For example: 60-W would indicate the sample was chalky white with little or no yellow pigmentation; 80-D would indicate that the sample had some yellow pigmentation, but was dull.

Dry Slick Color Score - This is determined by slicking the sample with a standard of known color rating and comparing the two.





Spaghetti Color - The spaghetti color scores were determined on a Model D 25 Hunter Color Difference Meter<sup>3/</sup> equipped with a D 25 A optical unit. The specimen area (2 in. diameter) was covered with straight spaghetti strands and readings were taken against a black background with 0% reflectance. Color difference values (L%, a%, and b%) were measured for all the spaghetti samples by the method of Walsh, Gilles and Shuey<sup>9/</sup>. A uniform chromaticity chart was used for determining spaghetti color scores.

#### Cooking Characteristics of Spaghetti-

##### a. Cooking Procedure

A modification of the method of Sheu et al.<sup>10/</sup> was adapted to determine cooking quality of spaghetti used in this study. Spaghetti (10 g.) which had been broken into lengths of approximately 5 cm., was placed into 300 ml. of boiling distilled water in a 500 ml. beaker. After 20 min. cooking, the samples were washed thoroughly with distilled water in a Buchner funnel and allowed to drain for 2 minutes. The cooking water as well as the washing solution was collected in pre-weighed 250 ml. beakers.

##### b. Tenderness Score

Two strands of cooked spaghetti were placed on a plexiglass plate and sheared at a 90° angle with a special plexiglass tooth. A continuous recording of distance versus force was made by the instrument during the operation. An automatic integrator was used to calculate the area under the curve (g. cm.) which was the amount of work required to shear the cooked spaghetti. To measure firmness, the average of four integrator scores was used, and the average work to shear was used as a measure of spaghetti firmness. The higher the value, the firmer the spaghetti. A value of approximately 5 appears to be preferential.

Calculations were as follows:

$$E = 0.0199 \times A \text{ (g. cm.)}$$

A = Average integrator reading

E = Area of curve in g. cm.

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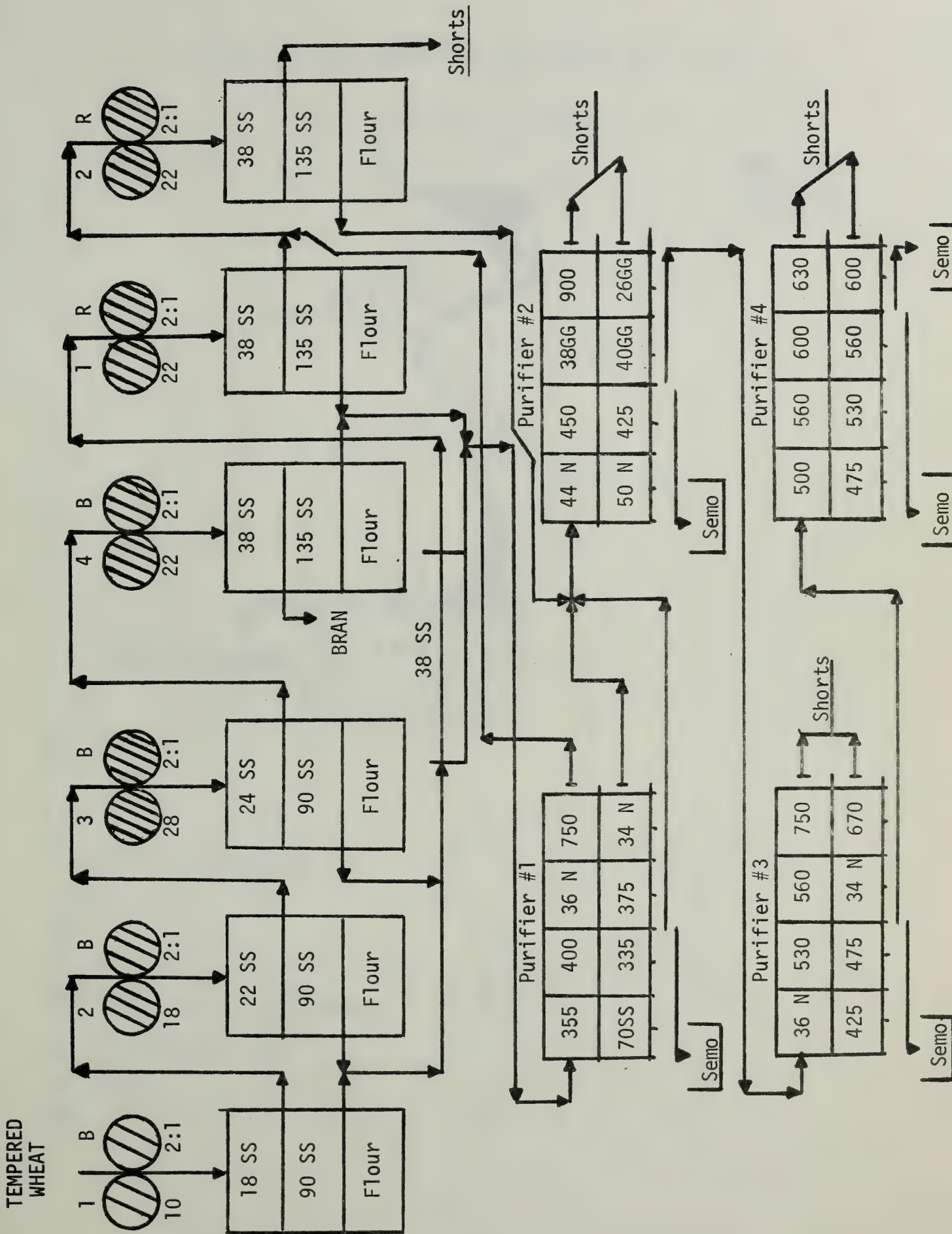
<sup>9/</sup> Walsh, D. E., Gilles, K. A., and Shuey, W. C. Color Determination of Spaghetti by the Tristimulus Method. *Cereal Chemistry* 46: 7-14 (1969).

<sup>10/</sup> Sheu, Ruey-Yi, Medcalf, D. G., Gilles, K. A., and Sibbitt, L. D. Effect of Biochemical Constituents on Macaroni Quality. I. Differences between Hard Red Spring and Durum Wheats. *J. Sci. Fd. Agric.* 18: 237-239 (1967).



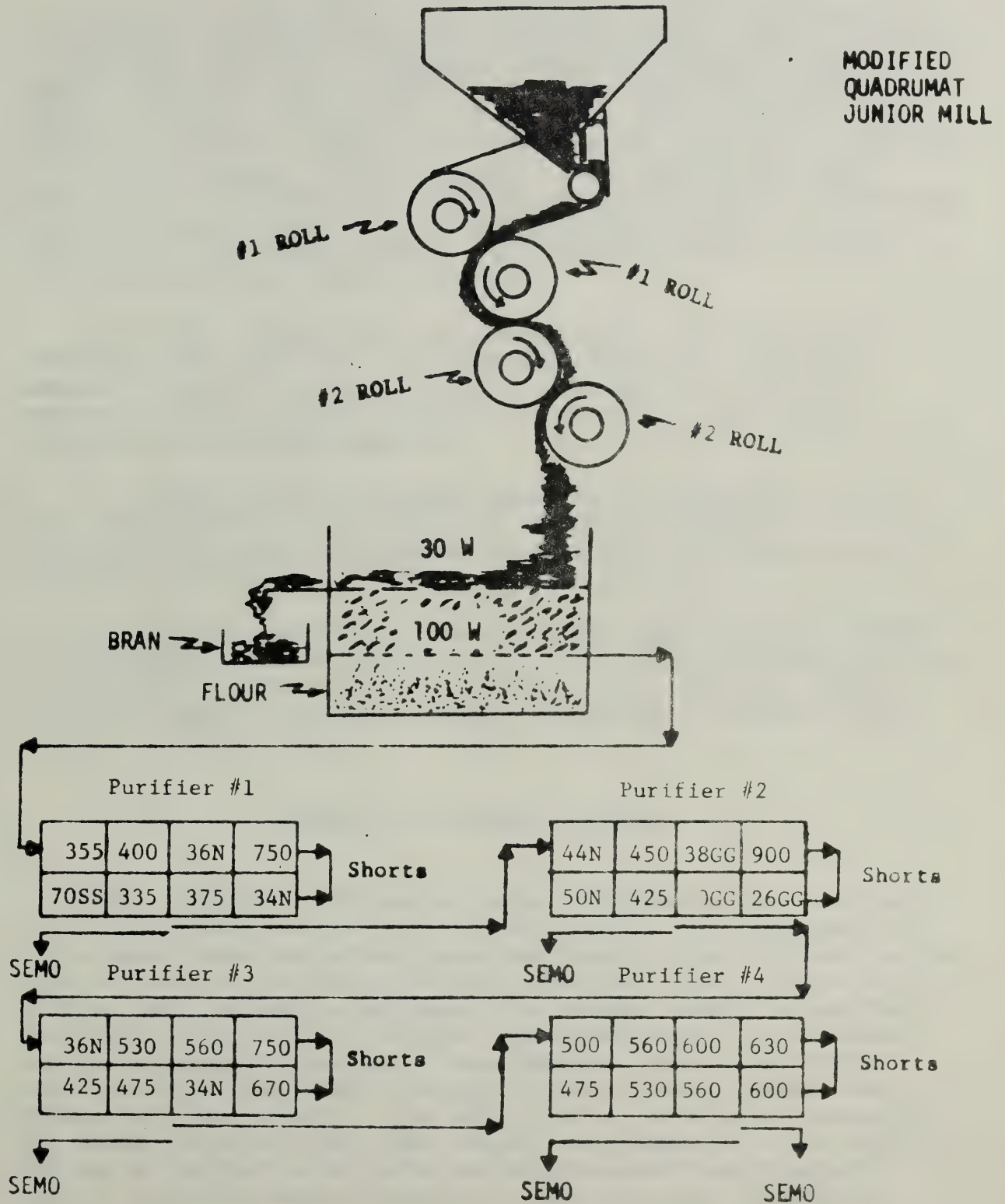


# FLOW DIAGRAM FOR LARGE DURUM WHEAT SAMPLES





# SCHEMATIC FLOW DIAGRAM FOR SMALL DURUM WHEAT SAMPLES







## EXPERIMENTAL RESULTS

The results obtained for the 1971 crop of durum wheat samples are tabulated and presented in the following order: Tables 2 through 4 - Advanced Yield Nursery Samples; Tables 5 through 8 - Field Plot Nursery Samples; Tables 9 and 10 - International Yield Nursery Samples; Tables 11 through 13 - Preliminary Yield Nursery Samples; Tables 14 through 22 - Special Nursery Samples; and Tables 23 through 30 - Uniform Regional Nursery Samples. Very few samples tested exhibited sprout damage, although some samples did exhibit weathering, blackpoint or green kernels. Table 1 includes the Macro and Micro data for the 1971 durum standard. For nurseries where a standard was not furnished, these results were used.

Only those samples which had an acceptable dust color score (above 87) were processed into spaghetti, except the large macro samples or those in which the plant breeder had an interest in evaluating. These general comments could be made regarding the processing of the micro samples.

1. Leeds, from all stations, appeared wet during mixing and sticky during the kneading even with the proper absorption. However, there was no problem in extruding the spaghetti or in adjusting for the proper absorption using 0.1 ml./25 lb. pressure.

2. At least one-third of the semidwarf samples did not respond to the absorption correction factor of 0.1 ml./25 lb. pressure. Also, it was unpredictable as to the direction of the correction factor, since some samples would over-correct and others under-correct with changes in absorption.

### ADVANCED YIELD NURSERY SAMPLES

Idaho (Table 2). Fifteen advanced yield samples were received from the Aberdeen station. Two of these samples were comprised of the standard named varieties, Leeds and Wandell; four of these samples were the Mexican varieties, Anhinga, Caste Lde L Monte, Crane, and Gerondo, and nine were selections. The Wandell sample did not have a sufficient color score in the dust and therefore was not processed, but had a general evaluation of some promise. Selection M6800127 showed good promise, while Selection D-18162-2R-3M-2Y showed some promise as a new variety. This selection has shown some promise for two years. Selection NDD 66102 showed some promise as a new variety but due to low dust color score was not processed into spaghetti. Some of the Idaho samples showed blackpoint and some yellowberry.





Montana (Table 3). Fourteen advanced yield nursery samples were received from the five Montana stations -- Bozeman, Creston, Havre, Moccasin, and Sidney. These samples were comprised of the two named varieties, Leeds and Wells, for all stations; while the samples from Sidney, both dryland and irrigated, also included the Hercules variety. The dryland samples had lower test weight, lower 1000 kernel weight, smaller kernel size distribution, higher protein, less purified semolina yield, higher semolina ash, less specks, higher color score, and tenderness score than the irrigated samples.

Washington (Table 4). Ten advanced yield nursery samples were received from the Royal Slope, Washington station. All of these were selections. Only Selection D620786-1 showed good promise. All of the other selections showed little promise.

#### FIELD PLOT NURSERY SAMPLES

California (Table 5). Six field plot nursery samples were received from the Isleton, California station. One of these samples was the standard named variety, Leeds. Three of these selections, ND 6655, D7010, and K6800718 showed little promise. The other two, D7015 and D7081, showed no promise. Some of these selections definitely showed soft milling characteristics undesirable for durum wheats.

California (Table 6). Eleven field plot nursery samples were received from Tulalake, California station. Three of these were the named varieties, Albatross, Crane A, and the standard Leeds variety. Only Selection Acc 63038 showed good promise. Selections D7064, and K6800719 showed some promise, while Selection NDD 6644 showed little promise. The rest of the selections showed no promise.

North Dakota (Tables 7 & 8). Thirty samples were received from the field plots at the Carrington, North Dakota station. The samples were raised on both irrigated and dryland. There was not as much difference between the dryland and irrigated samples as has been noted in other years or in other places. The irrigated samples all showed good promise, while Hercules, and Selections D6718, D6721 and D6761 showed some promise, and Selection D6647 showed little promise for the dryland series. The selections which showed good promise on both dryland and irrigated would be preferable.



#### INTERNATIONAL YIELD NURSERY SAMPLES

California (Table 9). Eight International Yield Nursery Samples were received from the Davis, California station. The named variety, Leeds, was the regular American variety, while there were three Mexican source varieties, Crane 'S' A, Crane 'S' B, and Jori C-69. The selection S-9 showed good promise. The rest of the samples showed no promise.

Washington (Table 10). Twenty-four International Yield Nursery Samples were received from the Pullman, Washington station. Leeds and Wandell showed good promise, and Capeiti and Selection S-9 showed some promise. The rest of the samples in the nursery, including Wells, showed little or no promise.

#### PRELIMINARY YIELD NURSERY SAMPLES

Washington (Table 11). Seventeen Preliminary Yield Nursery Samples were received from the Ellensburg, Washington station. Two of these were the named varieties, Leeds and Wandell. Selections K6800707, M6800127, and M6800139 showed good promise as new varieties. The selections K6800719, M6800116, M6800143, and M6800198 showed some promise. All of the rest of the selections showed little or no promise. The Ellensburg samples showed considerable content of yellowberry.

Washington (Table 12). Nineteen Preliminary Yield Nursery Samples were received from the Royal Slope, Washington station. Two of these samples were the named varieties, Leeds and Wandell. Selections K6800127, and M6800127 showed good promise. Selection WA 005867 showed some promise. The rest of the selections showed little promise.

Washington (Table 13). An additional 13 samples were received from the Royal Slope, Washington station. One of these samples was the named variety, Wandell. Selections NDD 64107 (#26), and NDD 66235 showed good promise as new varieties. Selections NDD 64127 (#20), ND 655015 (#21), and NDD 67201 (#53) showed some promise. All the rest of the selections showed little or no promise.

#### SPECIAL YIELD NURSERY SAMPLES

California (Table 14). Fifteen Special Nursery Samples were received from the El Centro, California station. Five of these samples were the named varieties, Albatross, Anhinga "S", Brant, Brant "S", and Crane. All of the samples in this nursery showed little or no promise.





California (Table 15). Twenty-two samples were received from the Genotype Environmental Durum Wheat Nursery at Tulalake, California. Two of these samples were the named variety, Sentry. Entry Nos. 15, 16, 24, 26, 31, 148, 149, and 70-168 showed good promise. Sentry-1 and Entry Nos. 2, 34, 42, 44, 100, 124, 133, 137, 156, 158, and 70-85 showed some promise. Entry No. 83 and the Sentry-80 showed little promise. The series of samples from this nursery showed some blackpoint and yellowberry.

California (Table 16). Fifty-nine Special Tulalake Field Station Nursery Samples were received from Tulalake, California. Entry Nos. 108, 587, 598, and 262 showed good promise as new varieties. Entry Nos. 557, and 542 showed some promise as new varieties, while the rest of the entries showed little or no promise as new varieties.

Washington (Table 17). Fifty-six samples were received from the Pullman, Washington station PI Line Series. This series contained only one named variety, Arnaud De Studina. The samples which were not processed into spaghetti did not have satisfactory dust color score. Only Selections PI 165202-1 and PI 165206-2 showed some promise as new varieties. All the rest of the selections showed little or no promise.

Washington (Table 18). Seventy-seven Special Mutant Series samples were received from the Pullman, Washington station. Mut. 1296 #2, Mut. 1324 #1, Mut. 1372 #1, Mut. 1372 #2, Mut. 1381 #1, Mut. 1381 #2, Mut. 1381 #4, Mut. 1383 #2, and Mut. 1386 #5 showed good promise as new varieties. Mut. 1247 #2, Mut. 1292 #1, Mut. 1296 #1, Mut. 1299 #1, Mut. 1316 #1, Mut. 1369 #1, Mut. 1376 #1, Mut. 1376 #2, Mut. 1376 #3, Mut. 1376 #4, Mut. 1378 #5, Mut. 1381 #6, Mut. 1381 #7, Mut. 1385 #12, and Mut. 1386 #6 showed some promise as new varieties. All of the other selections showed little or no promise.

Washington (Table 19). Thirty-four samples were received from the Pullman, Washington Special 707 Mutant Series. Mut. #4, #7, #8, #13, #14, #15, #16, #18, #21, #25, #27, #31, #32, #33, and #34 showed good promise as new varieties. Mut. #1, #5, and #6 showed some promise as new varieties. The other mutants showed little or no promise as new varieties.

Washington (Table 20). Three samples were received from the Regular Durum 1970 North Dakota Nursery Series grown at the Pullman, Washington station. D6674 and D6761 showed good promise as new varieties. The samples from this nursery showed some yellowberry.

Washington (Table 21). Fifty-one Special 50 g. Samples were received from the Pullman, Washington station. Mut. #35, #39, #42, #44, #45, #47, #48, #50, #51, #52, #53, #55, #56, #57, #58, #59, and #62 showed good promise as new varieties from their dust color score.





Washington (Table 21 Cont'd.). Mut. #37, Mut. 1296-4, Mut. 1306-3, Mut. 1324-2, NDD 63152-24-1, NDD 64115-52-1, NDD 64127-99-2, NDD 64150-59-1, and NDD 64150-59-3 showed some promise as new varieties. All of the other samples showed little or no promise as new varieties.

Washington (Table 22). Five samples were received from the Special Durum Wheat Nursery at Royal Slope, Washington. These samples were originally from a Chilean Durum Nursery. Four of these selections showed no promise. One selection showed little promise.

#### UNIFORM REGIONAL NURSERY SAMPLES

Minnesota (Tables 23, 24, & 25). Sixty-three samples were received from three stations in Minnesota -- Crookston, Morris, and St. Paul. Seven of these samples were the named varieties, Hercules, Lakota, Leeds, Mindum, Rolette, Wascana, and Wells. The St. Paul samples showed some blackpoint.

North Dakota (Tables 26 & 27). Forty-four samples were received from two stations in North Dakota -- Fargo and Langdon. These samples were processed in cooperation with the State and the data contained in the tables are the averages of the four replicates of the individual tests. Six of these samples were the named varieties, Hercules, Leeds, Mindum, Rolette, Wascana, and Wells.

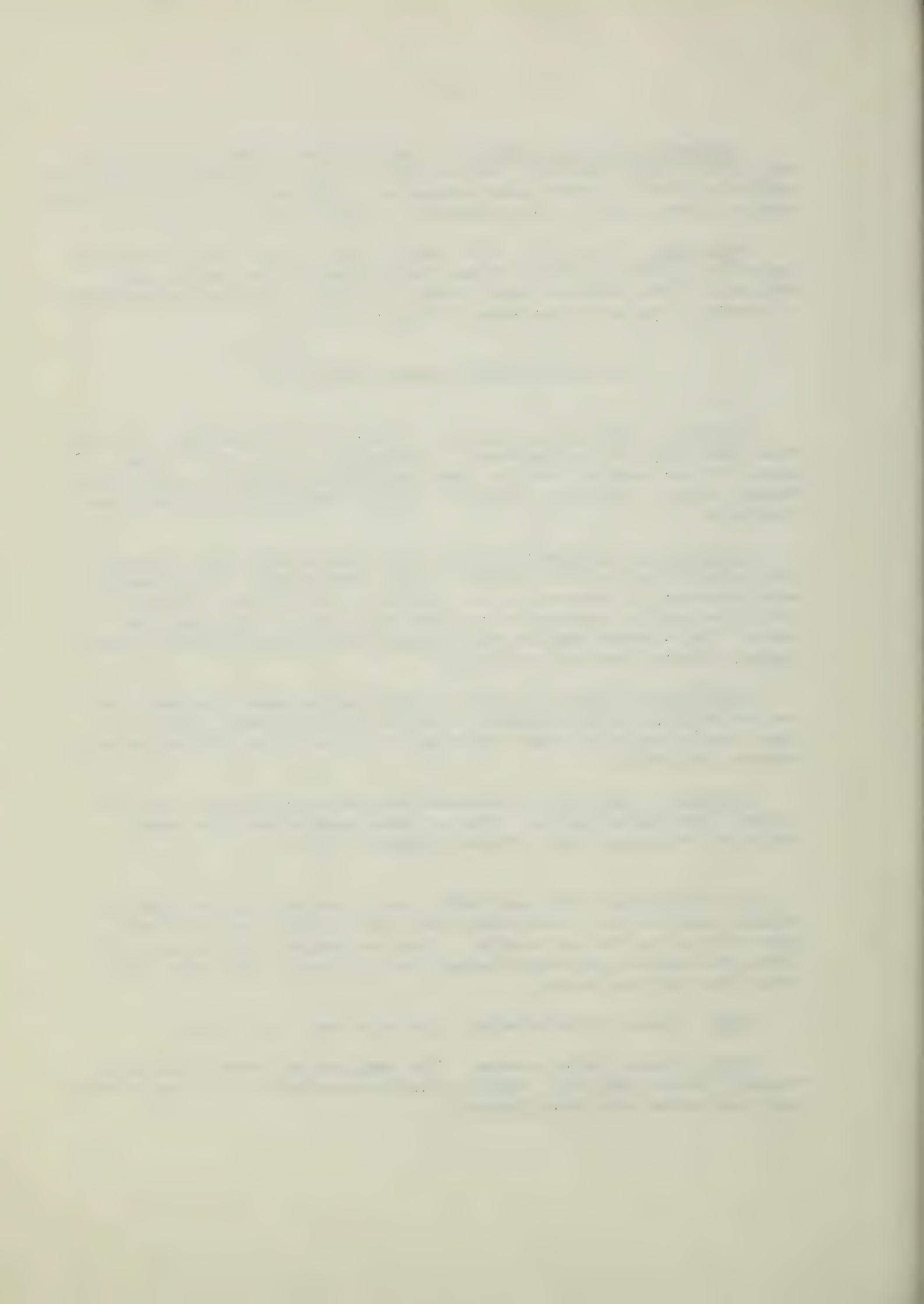
South Dakota (Tables 28 & 29). Forty samples were received from the two stations in South Dakota -- Eureka and Watertown. Six of these samples were the named varieties, Hercules, Leeds, Mindum, Rolette, Wascana, and Wells.

Washington (Table 30). Seventeen samples were received from the Pullman, Washington station. Five of these samples were the named varieties, Hercules, Leeds, Mindum, Rolette, and Wells.

Two selections, D6821 and D6878, were grown only at the Fargo and Langdon stations, and three selections, D6586, D6771, and D6780 were grown only at the Pullman station. These selections will be discussed first, followed by the overall general evaluation for the other selections from the four states.

D6821 - Shows little promise. Low color and slick score.

D6878 - Shows little promise. The Fargo series showed a definite tendency towards red color, which is highly undesirable. It has minimum color and kernel size distribution.



D6586 - Shows some promise, however, this selection has shown a tendency toward erratic results.

D6771 - Shows little promise, due to poor color score. This selection has been consistently showing minimum color score the past two years.

D6780 - Shows little promise, due again to poor extraction and minimum color as the past year.

DT 327 - Shows good promise.

D6647 - Based on three crop years, this selection would show little promise as a new variety due to somewhat erratic results, minimum color score and kernel size distribution.

D6674 - Shows good promise as a new variety, based on three crop years' results.

D6676 - Shows good promise.

D6714 - Shows good promise, although this year the results were not as good as the previous year.

D6715 - Shows some promise although this crop year's average results were very close to good promise, the previous crop year did show a minimum kernel size distribution.

D6718 - Based on two crop years, this selection shows some promise as a new variety based primarily on kernel size distribution, but this year did tend to have minimum color.

D6721 - Shows some promise, due primarily, as in previous years, to erratic results.

D6722 - Shows good promise. This year all of the samples showed good promise. Last year, only the South Dakota samples were undesirable.

D6723 - Shows good promise. Again, as in the case of D6722, last year's results were undesirable only from South Dakota.

D6733 - Shows little promise. Based on two crop years, this selection would not be a good variety.

D6761 - Shows some promise, based on this year's crop results.

D6838 - Based on this crop year's results, this selection would show little promise, due primarily to minimum kernel size distribution and poor color.





D6876 - This selection would show some promise as a new variety, but does show a tendency toward minimum kernel size distribution, 1000 kernel weight and color, but this is erratic.





# QUALITY DATA ON 1971 CROP STANDARD DURUM WHEAT SAMPLES

1/	Unofficial
2/	14% Moisture Basis
3/	Purified
4/	Below 80 color score

Variety or State Sel. No.	T.W. 1/ #/Bu.	1000 Kwt.	Kernel Size Lg. Med. Sm.	Wht. Pro. 2/ %	Semo. Pro. 2/ %	Pur. Semo. 3/ %	Semo. Ash 2/ %	Specks/ 10 Sq. In.	Dust Color Score 4/ %	Semo. Abs. 2/ %	Vis. Color	Tender. Score
<u>Micro Samples</u>												
1971 Durum Standard	62.0	36.3	34 64 2	13.0	-	48.8	-	-	95	34.8	9.94	-
<u>Macro Samples</u>												
1971 Durum Standard	62.0	36.3	34 64 2	13.0	12.3	57.9	.63	18.5	-	31.0	9.75	4.72



TABLE 2

## QUALITY DATA ON ADVANCED YIELD DURUM WHEAT NURSERY SAMPLES

IDAHO 1971 CROP

Variety or State Sel. No.	C.I. No.	T.W. 1/ #/Bu.	1000 Kwt.	Kernel Lg. Med. Sm.	Size % % %	Wht. Pro. 2/ %	Pur. Semo. 3/ %	Dust Color Score 4/ %	Semo. Abs. 2/ %	Vis. Color	Gen. Eval. 5/ %
Aberdeen											
Anhinga		64.4	51.5	87	12	1	14.0	50.7	75	-	1
Caste Lde L Monte		64.6	46.1	84	16	0	13.4	52.3	86	-	2
Crane		63.6	48.8	77	22	1	12.0	49.8	75	-	1
Gerondo		63.0	52.4	82	17	1	14.5	52.3	80	-	2
Leeds		65.0	44.4	75	24	1	15.3	50.0	92	34.3 10.0	4
15070											
Wandel11		63.3	35.6	32	64	4	11.8	52.5	87	-	3
NDD 06647		65.5	46.1	72	27	1	13.2	53.7	85	-	2
NDD 06659		64.5	47.1	76	23	1	13.0	53.4	85	-	2
NDD 06660		65.0	52.9	81	17	2	13.3	50.9	85	-	2
NDD 66102		65.5	50.0	78	21	1	12.8	54.4	87	-	3
M6800127		67.7	45.8	62	36	2	13.1	51.4	95	34.7 10.0	4
61-130/Leeds		65.7	48.3	79	20	1	13.2	53.9	85	-	2
D-18159-14Y-2C-5X		64.0	48.8	75	25	0	13.1	49.8	88	35.3 9.0	3
D-18162-2R-3M-2Y		63.0	49.0	64	35	1	13.9	48.2	85	-	2
11-20109-2C-12Y-2C-											
T.Pol.F4185309/5/My54//											
N10/B/3/T-gl/4/2*Yc		62.2	53.8	79	21	0	14.3	49.1	80	-	2

1/ Unofficial

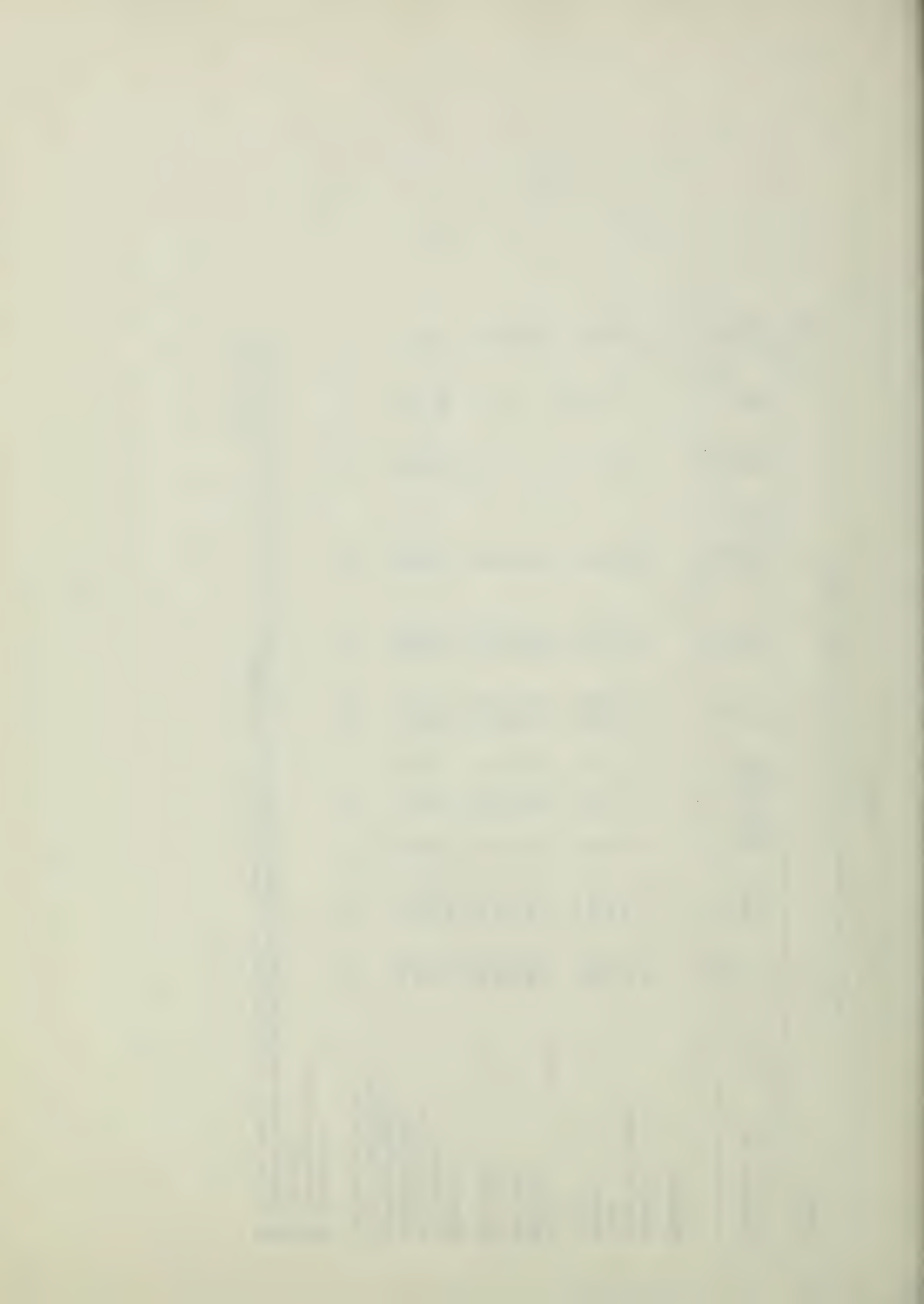
2/ 14% Moisture Basis

3/ Purified

4/ Below 80 color score not acceptable, normally; however, due to the excellent color this crop year, the minimum score is 88.

5/ 1 - No Promise, 2 - Little Promise, 3 - Some Promise, 4 - Good Promise.





### QUALITY DATA ON ADVANCED YIELD DURUM WHEAT NURSERY SAMPLES

1971 CROP

Variety or State Sel. No.	C.I. No.	T.W. 1/ #/Bu.	1000 Kwt.	Kernel Size		Wht. Pro. 2/ %	Semo. Pro. 2/ %	Pur. Semo. 3/ %	Semo. Ash 2/ %	Specks/ 10 Sq.In.	Semo. Abs. 2/ %	Vis. Color	Tender. Score
				Lg.	Med. Sm.								
<u>Sidney (Dryland)</u>													
Hercules		58.1	30.2	6	89	5	15.4	56.2	.71	3	32.0	10.0	5.60
Leeds	13768	61.4	30.1	5	94	1	17.4	56.6	.74	3	32.0	11.0	5.30
Wells	13333	57.7	24.2	2	76	22	17.5	54.2	.74	10	32.0	10.5	5.73
<u>Sidney (Irrigated)</u>													
Hercules		63.9	49.8	81	18	1	12.7	60.6	.64	33	32.0	8.5	4.96
Leeds	13768	65.4	45.7	74	25	1	12.6	60.1	.61	27	32.0	9.0	4.60
Wells	13333	65.0	41.0	62	34	4	11.1	59.1	.61	43	32.0	8.5	4.26
<u>Bozeman</u>													
Leeds	13768	61.3	40.5	33	61	6	15.5	57.0	.58	10	32.0	10.0	4.69
Wells	13333	60.1	35.3	25	68	7	15.2	60.2	.56	13	32.0	9.5	4.80
<u>Creston</u>													
Leeds	13768	61.6	42.7	62	36	2	15.7	56.6	.56	13	32.0	10.0	4.84
Wells	13333	61.0	38.9	40	57	3	14.3	56.8	.54	13	32.0	9.5	4.19
<u>Havre</u>													
Leeds	13768	62.2	34.0	19	79	2	15.1	56.1	.58	7	32.0	10.5	5.19
Wells	13333	61.1	31.0	11	83	6	13.9	56.4	.57	3	32.0	10.0	4.00
<u>Moccasin</u>													
Leeds	13768	61.5	31.1	2	95	3	17.3	55.4	.70	10	32.0	10.5	4.68
Wells	13333	59.5	22.7	1	80	19	17.1	54.3	.68	17	-	-	-
1/ Unofficial 2/ 14% Moisture Basis 3/ Purified													





TABLE 4

## QUALITY DATA ON ADVANCED YIELD DURUM WHEAT NURSERY SAMPLES

1971 CROP

WASHINGTON

Variety or State Sel. No.	C.I. No.	T.W. 1/ #/Bu.	1000 Kwt. g.	Kernel Size		Wht. Pro. 2/ %	Pur. Semo. 3/ %	Dust Color Score 4/ %	Semo. Abs. 2/ %	Vis. Color	Gen. Eval. 5/ %
				Lg.	Med. Sm.						
				%	%	%	%				
<u>Royal Slope</u>											
D620769-1		63.0	41.3	51	45	4	12.0	52.1	87	-	2
D620773-1		63.0	38.5	41	55	4	12.3	50.9	86	-	2
D620782-2		63.2	44.8	67	30	3	12.9	50.9	87	-	2
D620786-1		65.0	37.5	45	51	4	12.7	54.4	92	10.0	4
M6800131		63.5	39.2	46	51	3	11.7	53.9	86	-	2
M6800133		64.5	42.7	61	38	1	13.1	54.4	85	-	2
M6800138		64.5	44.6	60	39	1	13.8	53.2	85	-	2
M6800141		64.0	42.4	61	36	3	13.0	52.3	86	-	2
M6800145		66.0	41.7	58	40	2	13.5	54.2	86	-	2
M6800146		64.0	44.4	60	38	2	12.4	52.8	84	-	2

1/ Unofficial

2/ 14% Moisture Basis

3/ Purified

4/ Below 80 color score not acceptable, normally, however due to the excellent color this crop year, the minimum score is 88.

5/ 1 - No Promise, 2 - Little Promise, 3 - Some Promise, 4 - Good Promise.



### QUALITY DATA ON FIELD PLOT DURUM WHEAT NURSERY SAMPLES

1971 CROP

Variety or State Sel. No.	C.I. No.	T.W. 1/ #/Bu.	1000 Kwt.	Kernel Lg. Med. Sm.	Wht. Pro. 2/ %	Semo. Pro. 2/ %	Pur. Semo. 3/ %	Semo. Ash 2/ %	Specks/ 10 Sq. In.	Semo. Abs. 2/ %	Vis. Color	Tender. Score	Gen. Eval. 4/ %		
<u>Isleton</u>															
Leeds	13768	63.1	36.8	54	44	2	14.8	13.6	57.1	.60	13	32.0	9.0	3.48	4
ND 6655		63.4	44.1	58	40	2	13.9	12.5	59.1	.61	10	32.0	8.0	3.51	2
D7010		63.0	42.6	53	45	2	14.1	12.9	58.4	.59	7	32.0	8.0	3.47	2
D7015		62.6	45.0	68	31	1	12.4	11.1	59.0	.55	13	32.0	7.5	4.24	1
D7081		63.4	50.0	78	21	1	13.6	12.0	58.8	.57	20	32.0	7.0	3.96	1
K6800718		63.0	45.0	61	38	1	13.0	11.5	58.4	.59	17	32.0	8.0	3.35	2
1/ Unofficial															
2/ 14% Moisture Basis															
3/ Purified															
4/ 1 - No Promise, 2 - Little Promise, 3 - Some Promise, 4 - Good Promise.															





TABLE 6

## QUALITY DATA ON FIELD PLOT DURUM WHEAT YIELD NURSERY SAMPLES

## CALIFORNIA

1971 CROP

Variety or State Sel. No.	C.I. No.	T.W. 1/ #/Bu.	1000 Kwt.	Kernel Lg. Med. Size	Wht. Pro. 2/ %	Semo. Pro. 2/ %	Pur. Semo. 3/ %	Semo. Ash 2/ %	Specks/ 10 Sq.In.	Semo. Abs. 2/ %	Vis. Color	Tender. Score	Gen. Eval. 4/ %		
Tulelake															
Albatross		62.2	52.7	73	25	2	11.0	9.6	59.2	.66	13	32.0	7.5	3.68	1
Crane A.		62.7	42.2	68	31	1	9.5	8.3	57.9	.63	13	32.0	7.5	3.20	1
Leeds	13768	65.5	40.3	52	47	1	11.3	9.9	59.5	.61	10	32.0	9.5	3.56	4
NDD 6644		65.3	48.1	77	22	1	11.1	9.8	59.1	.62	10	32.0	8.0	3.19	2
Acc 63038		63.2	33.8	23	73	4	10.1	8.8	58.5	.57	17	32.0	10.0	3.70	4
D7064		62.8	48.8	78	21	1	10.2	8.7	59.3	.71	13	32.0	9.5	3.51	3
D7067		63.1	48.1	86	12	2	11.7	10.3	57.5	.61	10	32.0	7.5	3.64	1
D7068		64.1	46.7	76	23	1	10.7	9.2	60.7	.65	13	32.0	7.0	3.51	1
D7073		63.6	38.2	52	46	2	9.5	8.2	57.9	.61	10	32.0	7.5	2.88	1
07075		63.7	48.1	84	15	1	11.3	9.6	59.0	.61	13	32.0	7.0	2.90	1
K6800719		64.7	47.1	74	24	2	10.8	9.6	58.5	.52	10	32.0	8.0	3.41	3

1/ Unofficial

2/ 14% Moisture Basis

3/ Purified

4/ 1 - No Promise, 2 - Little Promise, 3 - Some Promise, 4 - Good Promise.



TABLE 7

## QUALITY DATA ON FIELD PLOT DURUM WHEAT NURSERY SAMPLES

NORTH DAKOTA

1971 CROP

Variety or State Sel. No.	C.I. No.	T.W. #/Bu.	1000 Kwt.	Kernel Size		Wht. Pro.	Semo. Pro.	Pur. Semo.	Semo. Ash	Specks/ 10 Sq.In.	Semo. Abs.	Vis. Color	Tender. Score	Gen. Eval.
				Lg.	Med. Sm.	2/ %	2/ %	3/ %	2/ %		2/ %			4/ %
<u>Carrington (Dryland)</u>														
Hercules		64.1	44.8	74	26	0	10.5	9.5	.60	17	32.0	9.0	4.38	3
Leeds	13768	65.7	42.6	61	39	0	11.1	10.3	.59	13	32.0	10.5	3.42	4
Rolette		65.7	43.9	69	31	0	10.9	9.8	.60	17	32.0	10.0	3.04	4
Wells	13333	64.5	36.1	46	53	1	10.2	9.4	.60	17	32.0	10.0	3.41	4
D6647		64.5	42.7	66	34	0	10.0	9.2	.58	17	32.0	8.5	3.42	2
D6674		64.8	44.6	68	32	0	11.1	10.1	.59	20	32.0	10.5	3.32	4
D6676		65.7	43.5	66	33	1	10.6	9.8	.59	20	32.0	10.5	3.30	4
D6714		64.7	42.2	58	42	0	10.6	9.7	.63	17	32.0	10.5	3.54	4
D6715		64.2	42.9	56	43	1	11.1	10.2	.62	20	32.0	10.0	4.05	4
D6718		64.6	42.6	67	33	0	10.7	9.7	.58	17	32.0	9.5	3.08	3
D6721		64.1	43.7	62	37	1	12.2	11.2	.60	27	32.0	9.5	3.79	3
D6722		64.2	44.8	63	37	0	11.9	11.1	.62	20	32.0	10.0	3.34	4
D6723		64.8	42.9	66	34	0	11.0	10.0	.61	20	32.0	10.5	3.37	4
D6733		64.6	41.8	61	39	0	12.2	11.2	.58	17	32.0	10.0	3.55	4
D6761		63.2	44.2	62	37	1	12.9	11.7	.59	17	32.0	9.5	3.57	3

1/ Unofficial

2/ 14% Moisture Basis

3/ Purified

4/ 1 - No Promise, 2 - Little Promise, 3 - Some Promise, 4 - Good Promise.



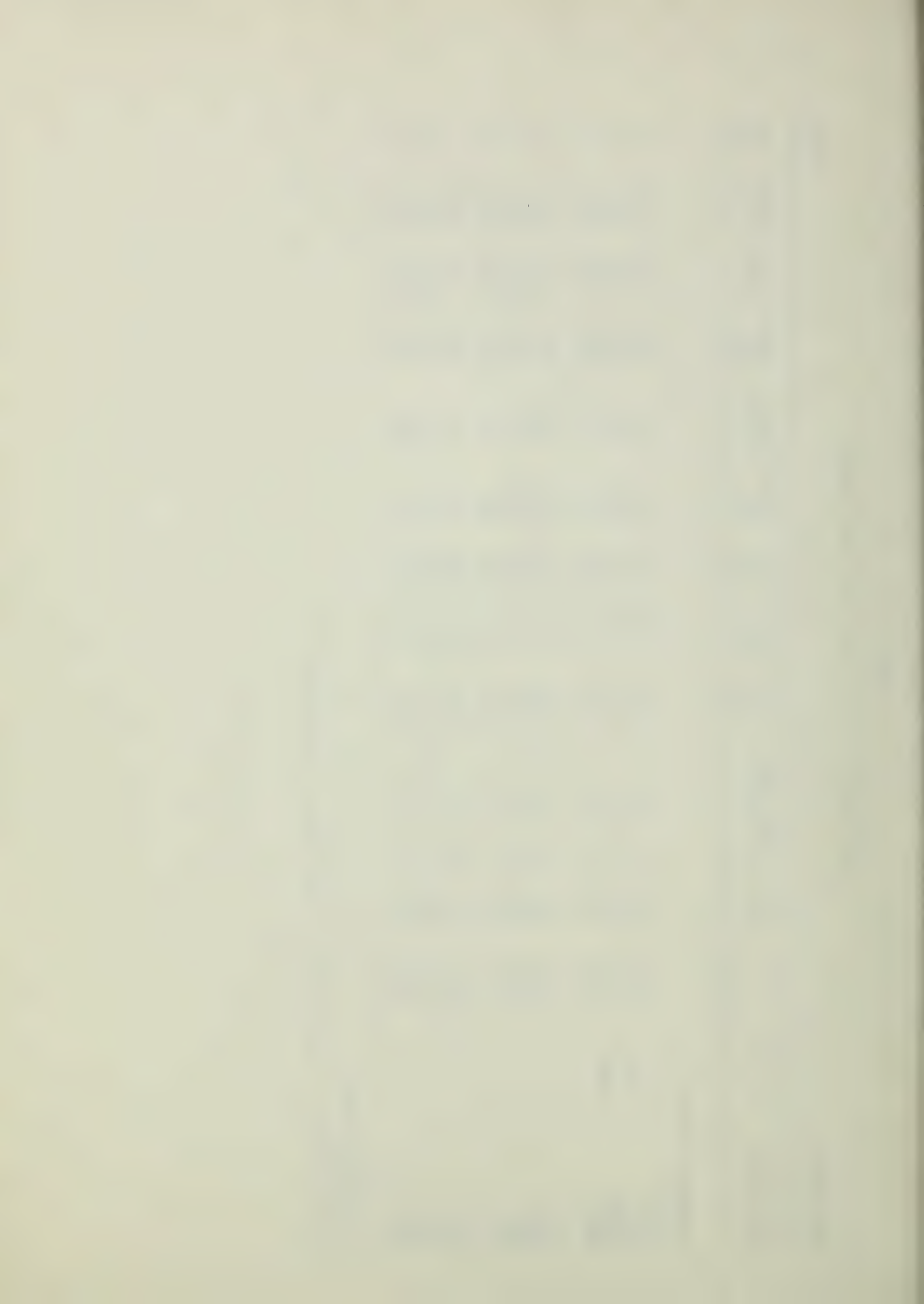


TABLE 8

## QUALITY DATA ON FIELD PLOT DURUM WHEAT NURSERY SAMPLES

NORTH DAKOTA

1971 CROP

Variety or State Sel. No.	C.I. No.	T.W. 1/ #/Bu.	1000 Kwt.	Kernel Lg. Med. Sm.	Wht. Pro. 2/ %	Semo. Pro. 2/ %	Pur. Semo. 3/ %	Semo. Ash 2/ %	Specks/ 10 Sq.In.	Semo. Abs. 2/ %	Vis. Color	Tender. Score	Gen. Eval. 4/ %
<u>Carrington (Irrigated)</u>													
Hercules		64.8	50.8	83	17	0	11.3	10.2	58.9	.63	13	4.22	4
Leeds	13768	64.8	42.6	64	36	0	12.2	11.8	56.4	.66	17	4.36	4
Rolette		64.6	47.8	76	23	1	12.1	11.1	57.5	.62	13	4.06	4
Wells	13333	64.3	36.5	43	56	1	12.0	10.6	57.3	.65	20	4.00	4
D6647		64.5	44.2	63	36	1	10.7	9.7	58.2	.62	13	4.03	4
D6674		64.9	46.1	74	25	1	11.4	10.4	57.4	.61	17	3.68	4
D6676		65.3	46.1	78	21	1	11.3	10.5	58.3	.61	10	4.10	4
D6714		65.5	47.6	72	27	1	11.2	10.1	57.8	.65	17	3.75	4
D6715		64.7	45.7	74	25	1	11.3	10.3	59.3	.66	20	4.07	4
D6718		64.7	45.7	70	29	1	12.4	11.5	56.7	.64	13	4.58	4
D6721		64.4	45.7	74	26	0	11.7	10.9	59.4	.61	17	4.60	4
D6722		64.8	43.5	70	30	0	10.5	9.7	57.5	.63	7	3.79	4
D6723		66.1	46.1	78	22	0	10.8	9.7	56.6	.60	10	3.99	4
D6733		66.0	42.2	68	32	0	10.6	9.7	58.1	.62	17	4.10	4
D6761		65.1	50.5	77	23	0	10.4	9.6	58.4	.60	10	3.49	4

1/ Unofficial

2/ 14% Moisture Basis

3/ Purified

4/ 1 - No Promise, 2 - Little Promise, 3 - Some Promise, 4 - Good Promise.



# QUALITY DATA ON INTERNATIONAL YIELD DURUM WHEAT NURSERY SAMPLES

1971 CROP

Variety or State Sel. No.	C.I. No.	T.W. 1/ #/Bu.	1000 Kwt.	Kernel Lg. Med. Sm.	Whit. Pro. 2/ %	Semo. Pro. 2/ %	Pur. Semo. 3/ %	Semo. Ash 2/ %	Specks/ 10 Sq.In.	Semo. Abs. 2/ %	Vis. Color	Tender. Score	Gen. Eval. 4/ %		
Davis															
Crane 'S' A		64.1	45.2	60	38	2	10.4	9.5	54.1	.55	13	32.0	8.0	4.49	1
Crane 'S' B		63.3	46.1	72	27	1	10.1	9.1	58.4	.58	13	32.0	7.5	4.10	1
Jori C-69		63.6	56.8	84	15	1	12.5	11.4	57.3	.59	10	32.0	7.5	4.37	1
Leeds	13768	63.6	37.5	48	51	1	13.5	12.7	59.3	.65	17	32.0	10.0	4.68	4
S-9		62.6	40.0	58	40	2	11.4	10.5	57.2	.68	7	32.0	10.0	4.50	4
(BYe <sup>2</sup> -Tace*Tc) <sup>4</sup> *(BYe-Tc*Stw x AH sib)															
Rae-Tc <sup>4</sup> *(Stw63*AA sib)		62.5	49.2	73	25	2	11.2	10.2	61.4	.62	10	32.0	8.0	4.68	1
T.dic Vernum (TMC-Tc <sup>4</sup> *2-B*W)		62.8	49.5	70	28	2	10.2	9.2	58.0	.63	17	32.0	6.5	4.37	1
		64.1	37.6	49	48	3	9.6	9.0	58.7	.60	7	32.0	7.5	3.94	1
1/ Unofficial															
2/ 14% Moisture Basis															
3/ Purified															
4/ 1 - No Promise, 2 - Little Promise, 3 - Some Promise, 4 - Good Promise.															





TABLE 10

## QUALITY DATA ON INTERNATIONAL YIELD DURUM WHEAT NURSERY SAMPLES

WASHINGTON

1971 CROP

Variety or State Sel. No.	C.I. No.	T.W. 1/ #/Bu.	1000 Kwt. g.	Kernel Size		Wht. Pro. 2/ %	Pur. Semo. 3/ %	Dust Color Score 4/ %	Semo. Abs. 2/ %	Vis. Color	Gen. Eval. 5/ %
				Lg.	Med. Sm.						
Pullman											
Anhinga 'S'		65.0	51.0	78	21	1	13.2	80-R	-	-	2
Brant 'S'		62.5	49.0	73	26	1	12.5	82	-	-	2
Capeiti		64.5	50.5	82	17	1	13.1	90	37.0	9.0	3
Crane 'S' (A)		64.0	45.7	69	30	1	12.0	80	-	-	2
Crane 'S' (B)		62.5	41.8	57	42	1	11.9	80	-	-	2
Gerondo V - 2 - 466		63.0	49.8	75	24	1	13.5	80	-	-	2
Hercules		64.0	51.5	79	20	1	13.3	85	-	-	2
Jori C - 69		64.0	57.5	86	13	1	13.1	80	-	-	2
Leeds	13768	65.0	45.0	71	28	1	14.1	90	36.3	10.0	4
Oviachic C - 65		63.0	45.0	63	36	1	11.7	87	-	-	2
Tehuacan 60		64.0	56.5	84	15	1	13.2	85	-	-	2
Wandell	15070	63.5	37.5	33	64	3	11.3	88	36.3	10.0	4
Wells	13333	64.0	40.7	61	37	2	13.0	87	-	-	2
GA B - 125		62.5	56.2	83	16	1	12.8	83	-	-	2
S - 9		64.0	42.9	63	36	1	12.2	89	37.7	9.5	3
66W 5101		64.0	49.3	69	30	1	11.4	80	-	-	2
64W 5102 - 948		62.5	47.1	77	22	1	12.9	78	-	-	1
61 - 130 X Leeds		65.0	48.8	77	22	1	12.3	83	-	-	2
(BBAL X BY2E - TC)											
(DBUCK X TME - TC/LAK)		61.0	58.8	79	20	1	12.3	78	-	-	1
(BY2E - TACE X TC4) (BY2E - TC X STW/AA'S')		62.0	50.8	74	25	1	12.4	78	-	-	1
(BY2E - TC) 2 (Z - B X W)		63.0	51.0	76	23	1	13.2	75	-	-	1
((MY54 - NIOB X TGL/TC2) LAK) (B116E - TC")		64.0	52.6	83	16	1	13.0	82	-	-	2
RAE - TC4 X STW 63/AA'S'		63.5	50.0	73	25	2	11.4	70	-	-	1
T. Dic. Vernum (TME - TC2/Z - BXW)		65.0	44.8	65	34	1	11.1	75	-	-	1

1/ Unofficial

2/ 14% Moisture Basis

3/ Purified

4/ Below 80 color score not acceptable, normally; however, due to the excellent color this crop year, the minimum score is 88. R - Red.

5/ 1 - No Promise, 2 - Little Promise, 3 - Some Promise, 4 - Good Promise.



TABLE 11

## QUALITY DATA ON PRELIMINARY YIELD DURUM WHEAT NURSERY SAMPLES

1971 CROP												
Variety or State Sel. No.	C.I. No.	T.W. 1/ #/Bu.	1000 Kwt.	Kernel Size		Wht. Pro. 2/ %	Pur. Semo. 3/ %	Dust Color Score 4/ %	Semo. Abs. 2/ %	Vis. Color	Gen. Eval. 5/ %	
			g.	%	%	%	%					
Ellensburg												
Leeds	13768	63.5	40.8	60	39	1	14.9	49.5	90	35.0	10.0	4
Wandell	15070	64.0	35.8	17	80	3	11.5	52.8	87	-	-	2
K6800707		65.0	42.4	57	42	1	13.3	50.2	96	36.0	10.0	4
K6800719		64.5	45.8	77	22	1	13.6	49.5	89	37.0	9.0	3
M6800116		63.5	39.7	23	75	2	13.7	52.3	89	35.7	9.0	3
M6800121		63.5	38.2	23	76	1	13.9	50.7	87	-	-	2
M6800127		64.0	41.7	51	48	1	14.3	50.0	94	34.3	10.0	4
M6800139		63.5	39.7	44	55	1	14.1	50.2	91	34.7	9.5	4
M6800143		64.0	37.2	31	68	1	13.7	49.3	91	34.7	9.0	3
M6800162		63.0	36.6	19	79	2	13.4	47.7	83	-	-	2
M6800198		63.0	39.1	41	58	1	13.8	47.7	88	34.0	9.0	3
NDD 06647		65.0	44.6	63	36	1	13.0	52.4	87	-	-	2
NDD 06659		64.5	45.7	67	32	1	13.3	51.6	87	-	-	2
NDD 66102		65.0	44.6	67	32	1	13.0	51.1	86	-	-	2
WA 005867		65.0	41.8	64	35	1	12.4	51.4	87	-	-	2
WA 005868		64.0	42.7	55	44	1	11.7	50.2	78	-	-	1
WA 005869		64.5	45.2	70	29	1	13.0	51.6	86	-	-	2

1/ Unofficial

2/ 14% Moisture Basis

3/ Purified

4/ Below 80 color score not acceptable, normally; however, due to the excellent color this crop year, the minimum score is 88.

5/ 1 - No Promise, 2 - Little Promise, 3 - Some Promise, 4 - Good Promise.



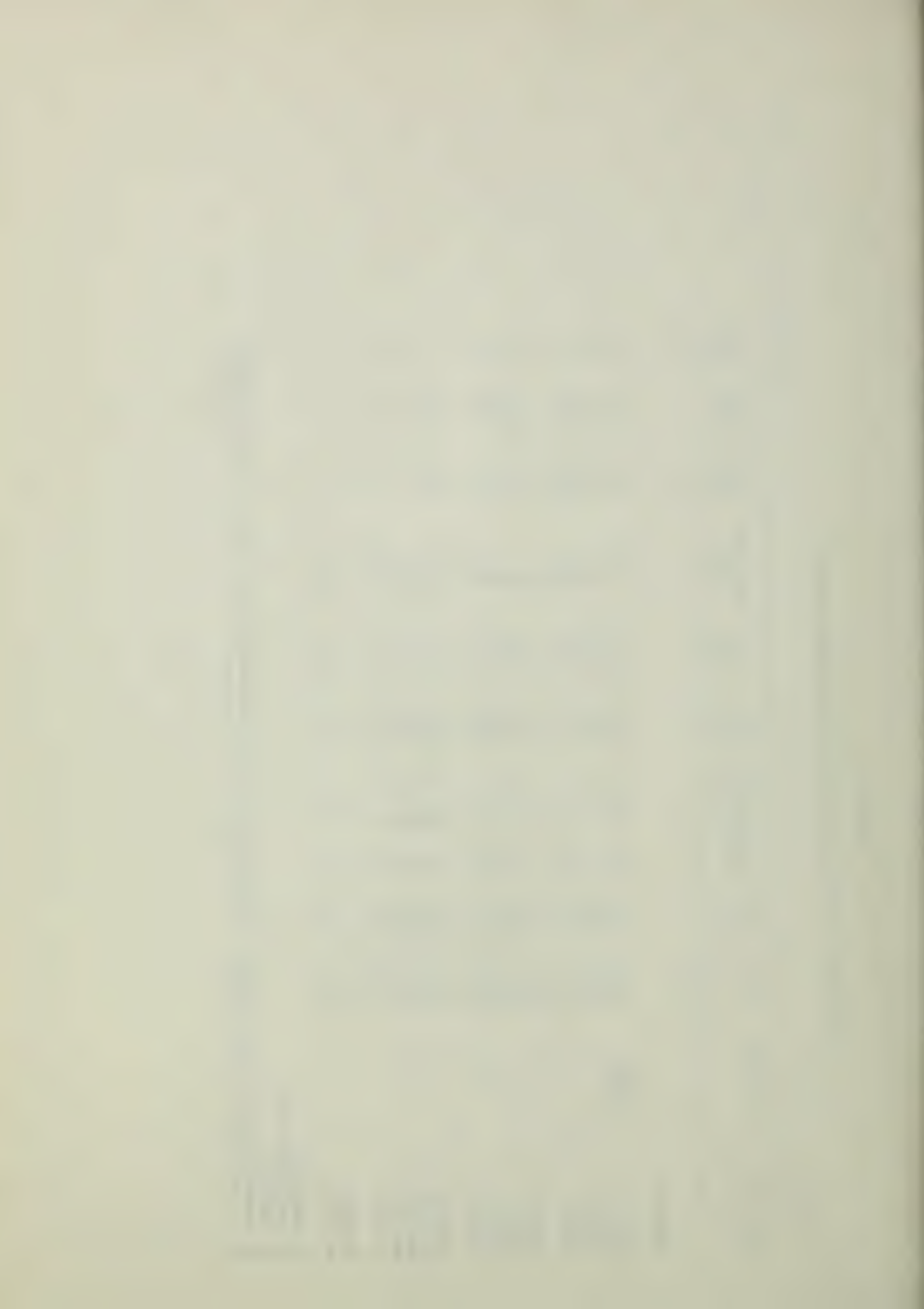


TABLE 12

## QUALITY DATA ON PRELIMINARY YIELD DURUM WHEAT NURSERY SAMPLES

WASHINGTON

1971 CROP

Variety or State Sel. No.	C.I. No.	T.W. 1/ #/Bu.	1000 Kwt.	Kernel Size		Wht. Pro. 2/ %	Pur. Semo. 3/ %	Dust Color Score 4/ %	Semo. Abs. 2/ %	Vis. Color	Gen. Eval. 5/ %	
			g.	%	%	%	%					
Royal Slope												
Leeds	13768	64.2	44.6	73	26	1	14.1	53.9	91	35.3	10.0	4
Wandell	15070	62.0	37.2	35	62	3	12.2	54.6	90	37.0	10.0	4
K6800707		65.0	45.0	73	26	1	13.4	54.6	95	34.3	10.0	4
K6800718		64.0	47.8	75	24	1	12.0	53.9	85	-	-	2
K6800719		64.0	50.2	79	20	1	13.4	51.6	87	-	-	2
M6800116		64.2	42.2	58	41	1	13.6	52.1	82	-	-	2
M6800121		64.0	42.0	57	42	1	12.8	54.8	87	-	-	2
M6800127		64.0	46.3	71	28	1	13.8	53.0	89	33.7	10.0	4
M6800139		64.2	42.6	63	26	1	13.3	53.2	80	-	-	2
M6800140		64.2	42.7	66	33	1	13.2	53.2	85	-	-	2
M6800143		64.5	41.0	60	39	1	13.1	53.2	86	-	-	2
M6800162		63.5	39.8	30	69	1	13.5	50.9	82	-	-	2
M6800198		64.0	41.2	58	41	1	13.1	52.8	85	-	-	2
NDD 06647		65.0	49.8	78	21	1	12.1	53.7	83	-	-	2
NDD 06659		64.0	50.5	77	22	1	12.3	53.2	86	-	-	2
NDD 06660		64.0	53.5	79	20	1	12.1	53.9	87	-	-	2
NDD 66102		63.0	52.1	77	22	1	12.8	52.5	87	-	-	2
WA 005867		64.0	45.5	76	23	1	12.3	53.0	88	35.7	9.0	3
WA 005869		64.5	49.5	77	22	1	12.2	53.2	85	-	-	2

1/ Unofficial

2/ 14% Moisture Basis

3/ Purified

4/ Below 80 color score not acceptable, normally; however, due to the excellent color this crop year, the minimum score is 88.

5/ 1 - No Promise, 2 - Little Promise, 3 - Some Promise, 4 - Good Promise.



TABLE 13

## QUALITY DATA ON PRELIMINARY YIELD DURUM WHEAT NURSERY SAMPLES

WASHINGTON

1971 CROP

Variety or State Sel. No.	C.I. No.	T.W. 1/ #/Bu.	1000 Kwt.	Kernel Size		Wht. Pro. 2/ %	Pur. Semo. 3/ %	Dust Color Score 4/ %	Semo. Abs. 2/ %	Vis. Color	Gen. Eval. 5/ %
				Lg.	Med. Sm.						
Royal Slope											
Wandell	15070	64.0	39.8	47	50	3	10.3	88	37.7	9.5	3
MD 000104		63.0	49.5	77	22	1	13.6	78	-	-	1
MD 000106		65.5	52.4	79	20	1	11.6	78	-	-	1
MD 000108		66.0	56.8	79	20	1	11.4	78	-	-	1
MD 000117		67.0	59.5	85	14	1	11.7	79	-	-	1
MD 000132		64.5	53.8	75	24	1	12.2	82	-	-	2
MD 000134		63.0	54.3	79	20	1	11.8	79	-	-	1
MD 000135		64.0	61.0	89	10	1	12.2	79	-	-	1
MD 000136		65.0	53.5	73	25	2	10.5	79	-	-	1
NDD 64056 (#16)		63.0	48.1	63	35	2	12.7	84	-	-	2
NDD 64056 (#24)		64.5	53.2	83	16	1	12.4	78	-	-	1
NDD 64089 (#17)		62.0	46.9	71	27	2	11.9	85	-	-	2
NDD 64089 (#25)		64.0	43.7	66	33	1	12.0	80	-	-	2
NDD 64107 (#18)		63.5	43.3	63	35	2	12.2	85	-	-	2
NDD 64107 (#26)		64.5	48.8	69	30	1	11.9	93	38.0	10.0	4
NDD 64111		62.5	51.3	79	19	2	12.8	84	-	-	2
NDD 64127 (#20)		66.0	52.9	78	21	1	11.3	88	34.7	9.5	3
NDD 64127 (#27)		65.0	43.1	67	30	3	11.8	82	-	-	2
NDD 64127-A		64.0	45.5	73	26	1	14.1	83	-	-	2
NDD 64153		62.5	48.3	71	26	3	12.8	79	-	-	1
NDD 65015 (#21)		63.0	50.2	80	19	1	13.0	92	37.3	9.0	3
NDD 65015 (#22)		62.5	50.8	75	24	1	12.1	70	-	-	1
NDD 65019		66.0	47.6	77	22	1	12.7	75-R	-	-	1
NDD 65203		63.0	51.5	68	29	3	11.2	80	-	-	2
NDD 65205		63.8	52.1	81	18	1	12.0	78	-	-	1

(CONT'D.)



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TABLE 13 (Cont'd.)

## QUALITY DATA ON PRELIMINARY YIELD DURUM WHEAT NURSERY SAMPLES

WASHINGTON

1971 CROP

Variety or State Sel. No.	C.I. No.	T.W. 1/ #/Bu.	1000 Kwt.	Kernel Size		Wht. Pro. 2/ %	Pur. Semo. 3/ %	Dust Color Score 4/ %	Semo. Abs. 2/ %	Vis. Color	Gen. Eval. 5/ %
				Lg.	Med. Sm.						
Royal Slope (Cont'd.)											
NDD 66151 (#32)		64.0	48.5	66	32	2	11.3	85	-	-	2
NDD 66151 (#38)		65.0	48.3	72	27	1	10.7	79	-	-	1
NDD 66157		64.0	55.6	81	18	1	11.6	84	-	-	2
NDD 66159		65.0	51.5	79	20	1	11.6	83	-	-	2
NDD 66200		63.0	46.5	74	25	1	11.7	78	-	-	1
NDD 66235		64.5	50.0	82	17	1	11.8	91	38.0	10.0	4
NDD 66295		64.5	43.1	69	30	1	12.3	79	-	-	1
NDD 66255 (#42)		63.0	60.2	91	9	0	13.3	79-R	-	-	1
NDD 66255 (#43)		64.0	56.5	79	20	1	11.3	78	-	-	1
NDD 67201 (#52)		62.0	60.2	77	22	1	12.3	82	-	-	2
NDD 67201 (#53)		64.5	47.8	79	20	1	12.5	88	37.3	9.0	3

1/ Unofficial

2/ 14% Moisture Basis

3/ Purified

4/ Below 80 color score not acceptable, normally; however, due to the excellent color this crop year, the minimum

5/ 1 - No Promise, 2 - Little Promise, 3 - Some Promise, 4 - Good Promise.

score is 88. R - Red.

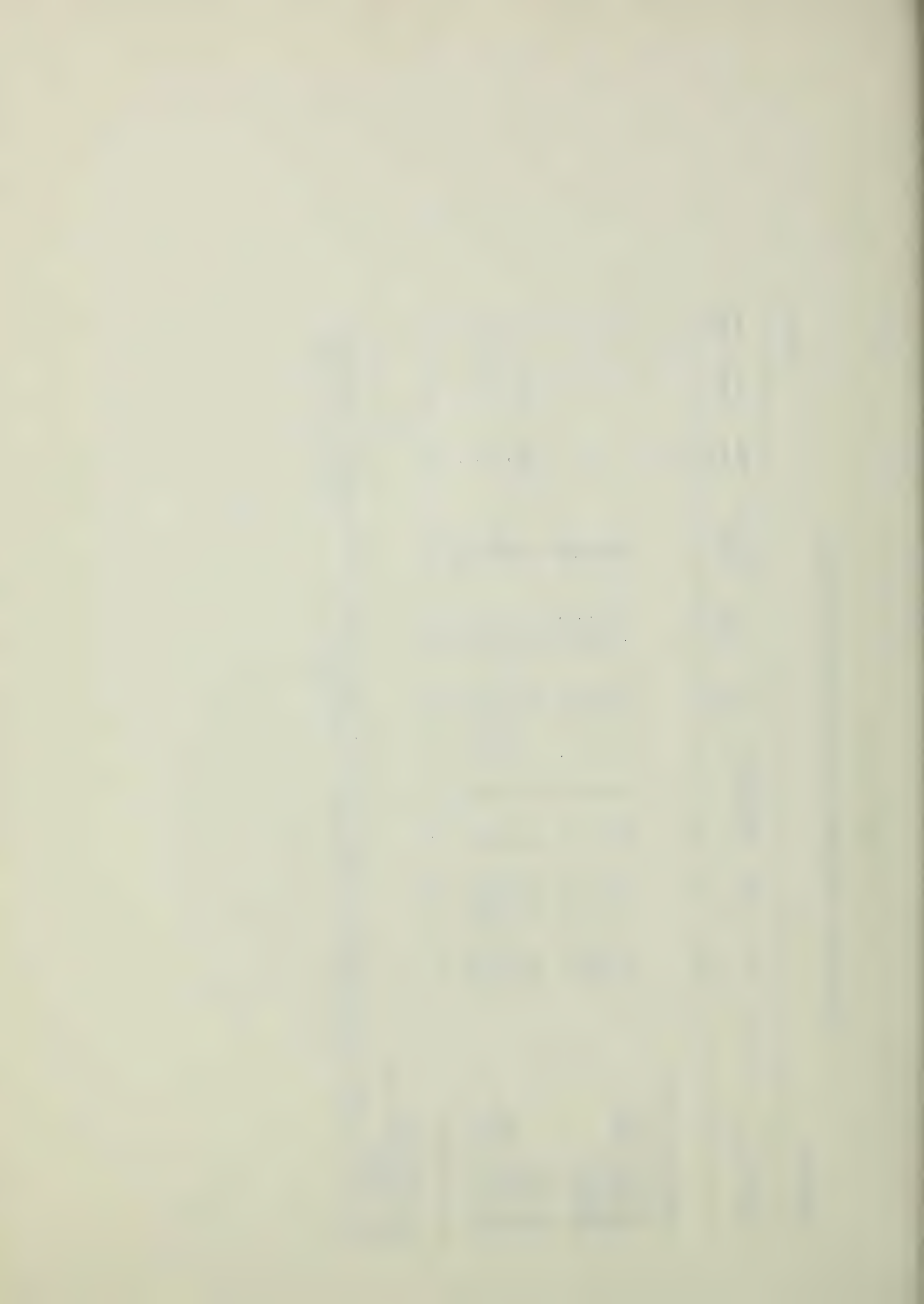


TABLE 14

## QUALITY DATA ON SPECIAL DURUM WHEAT NURSERY SAMPLES

1971 CROP

CALIFORNIA

Variety or State Sel. No.	C.I. No.	T.W. 1/ #/Bu.	1000 Kwt.	Kernel Size		Wht. Pro. 2/ %	Pur. Semo. 3/ %	Dust Color Score 4/ %	Semo. Abs. 2/ %	Vis. Color	Gen. Eval. 5/ %
				Lg.	Med. Sm.						
<u>E1 Centro</u>											
Albatross		64.5	58.8	83	16	1	13.4	54.8	70	-	1
Anhinga "S"		65.0	50.2	67	30	3	13.5	51.6	65	-	1
Brant		63.0	48.3	71	23	6	12.6	50.8	60	-	1
Brant "S"		62.0	50.0	67	30	3	12.8	49.5	60	-	1
Crane		63.0	47.6	59	40	1	12.7	48.4	70	-	1
D7064		62.5	44.8	51	46	3	12.7	49.2	70	-	1
D7064 Date I		63.5	48.3	63	36	1	12.4	51.6	70	-	1
D7064 Date II		64.0	57.1	86	13	1	12.3	52.2	70	-	1
D7064 Date III		63.5	54.9	83	16	1	10.3	52.2	70	-	1
D7066		63.5	46.5	68	31	1	12.2	47.8	60	-	1
D7066 Advanced		64.0	54.0	85	14	1	11.3	48.7	60	-	1
D7070		64.5	48.3	26	73	1	12.9	48.6	70	-	1
D7022		64.5	53.2	83	16	1	12.7	50.8	60	-	1
D7073		63.5	39.4	33	64	3	11.5	50.5	65	-	1
D7074		62.5	52.4	85	14	1	11.9	50.5	85	-	2

1/ Unofficial

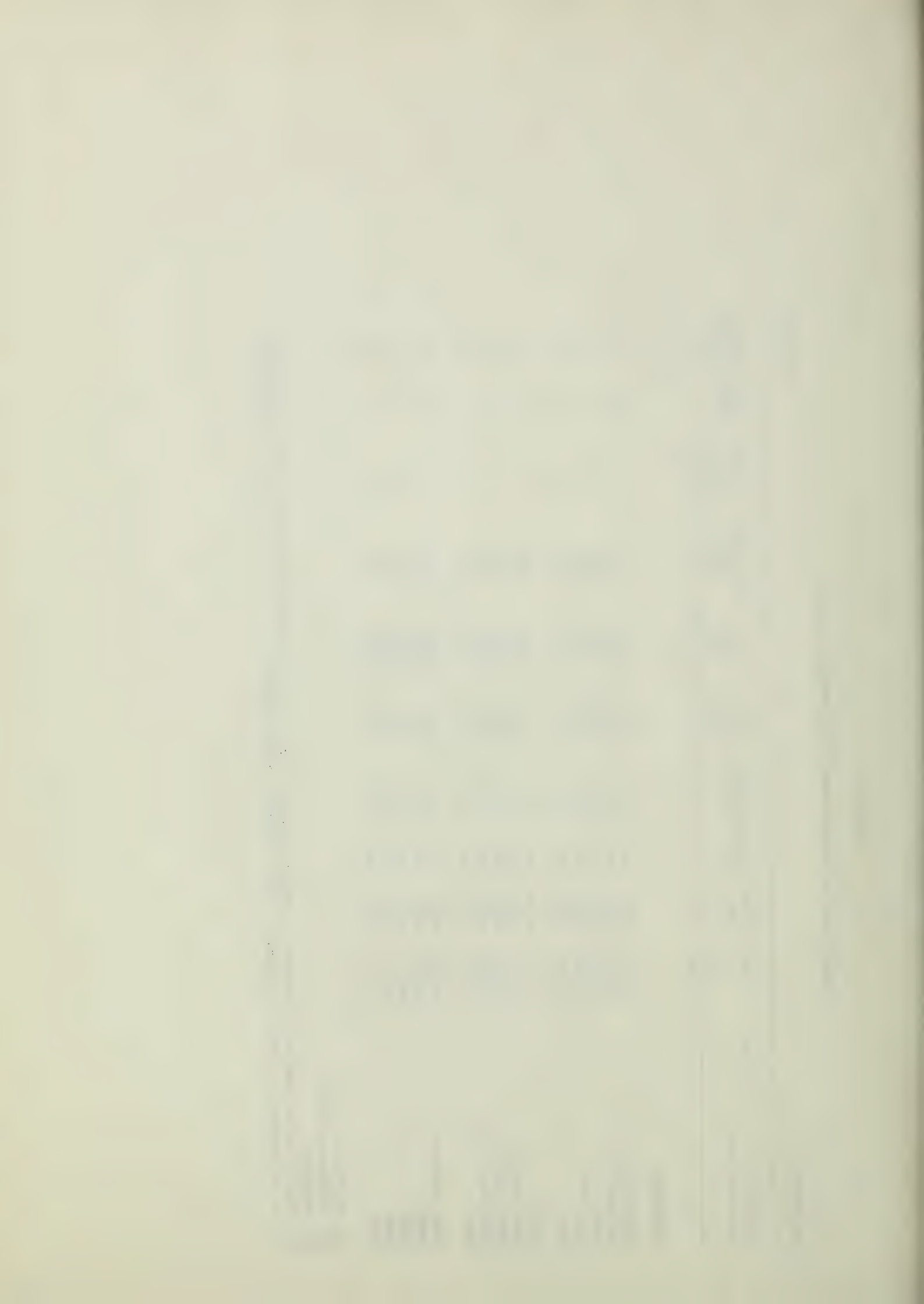
2/ 14% Moisture Basis

3/ Purified

4/ Below 80 color score not acceptable, normally; however, due to the excellent color this crop year, the minimum score is 88.

5/ 1 - No Promise, 2 - Little Promise, 3 - Some Promise, 4 - Good Promise.





# QUALITY DATA ON SPECIAL GENOTYPE ENVIRONMENTAL

VARIETY OR State Sel. No.		C.I. No.	T.W. 1/ #/Bu.	1000 Kwt.	Kernel Size		Wht. Pro. 2/ %	Pur. Semo. 3/ %	Dust Color Score 4/ %	Semo. Abs. 2/ %	Vis. Color	Gen. Eval. 5/ %	
DURUM WHEAT NURSERY SAMPLES													
1971 CROP													
CALIFORNIA													
Tulelake													
Sentry-1			62.0	49.3	70	28	2	14.4	47.7	89	34.0	9.0	3
2			59.0	48.1	72	26	2	11.8	46.6	88	37.0	8.5	3
15			63.0	44.2	62	36	2	12.9	46.4	95	36.0	9.5	4
16			62.0	42.4	56	42	2	12.4	48.4	95	35.7	10.0	4
24			61.0	35.2	31	65	4	13.4	48.4	101	35.3	10.0	4
26			61.0	39.7	49	49	2	13.2	49.8	95	35.3	10.0	4
31			60.0	39.1	40	58	2	12.4	46.6	98	35.3	9.0	4
34			62.5	41.2	55	44	1	12.4	48.2	92	37.7	9.0	3
42			62.5	43.3	57	42	1	12.8	52.0	90	37.7	9.0	3
44			61.0	42.7	64	35	1	12.7	47.9	92	36.0	9.0	3
83			60.0	43.5	59	40	1	11.7	48.2	83	-	-	2
100			60.0	38.8	47	48	5	12.6	47.3	91	34.7	8.5	3
124			62.0	36.4	37	59	4	12.0	49.8	93-R	33.3	9.5	3
133			62.5	43.1	64	35	1	13.2	47.5	89	34.0	9.0	3
137			60.5	41.8	49	49	2	12.7	47.9	91	34.7	9.5	3
148			61.5	38.0	39	59	1	12.1	46.1	96	35.0	9.5	4
149			59.0	30.2	9	86	5	11.9	46.3	100	34.7	9.5	4
156			60.5	33.9	25	71	4	12.4	48.2	93	35.7	9.0	3
158			60.5	37.5	23	72	5	11.8	49.8	88	35.0	9.0	3
70-168			62.5	42.9	44	53	3	12.0	48.4	95	35.7	10.0	4
70-85			62.0	46.7	70	28	2	12.7	50.2	90	35.7	9.0	3
Sentry-80			60.5	42.9	57	41	2	14.0	50.0	86	-	-	2
1/ Unofficial													
2/ 14% Moisture Basis													
3/ Purified													
4/ Below 80 color score not acceptable, normally; however, due to the excellent color this crop year, the minimum score is 88. R - Red.													
5/ 1 - No Promise, 2 - Little Promise, 3 - Some Promise, 4 - Good Promise.													



TABLE 16

## QUALITY DATA ON SPECIAL TULELAKE FIELD

1971 CROP

## STATION DURUM WHEAT NURSERY SAMPLES

CALIFORNIA

Variety or State Sel. No.	C.I. No.	T.W. 1/ #/Bu.	1000 Kwt.	Kernel Size			Wht. Pro. 2/ %	Pur. Semo. 3/ %	Dust Color Score 4/ %	Semo. Abs. 2/ %	Vis. Color	Gen. Eval. 5/ %
				Lg.	Med.	Sm.						
<u>Tulelake</u>												
6		64.0	51.5	79	20	1	12.3	53.3	81	-	-	2
20		64.0	45.7	68	30	2	13.3	51.8	80	-	-	2
25		63.0	51.0	82	16	2	13.5	48.6	82	-	-	2
29		63.0	50.5	78	20	2	12.9	50.2	84	-	-	2
36		63.0	48.1	70	28	2	12.0	50.9	80	-	-	2
21		62.5	47.8	74	24	2	12.4	49.5	80	-	-	2
44		63.5	44.4	65	33	2	12.5	49.8	84	-	-	2
45		63.0	49.5	74	24	2	12.6	51.4	81	-	-	2
63		63.5	52.6	83	16	1	14.0	48.6	82	-	-	2
100		63.0	42.8	58	40	2	12.3	49.3	86	-	-	2
108		62.5	47.1	70	27	3	13.8	51.1	88	33.7	9.5	4
109		62.0	43.7	65	34	1	12.9	48.4	81	-	-	2
115		62.5	55.6	78	19	3	13.6	48.4	79	-	-	1
143		61.5	52.4	78	20	2	13.8	47.5	80	-	-	2
152		63.5	55.2	81	18	1	12.6	46.8	84	-	-	2
150		62.0	54.6	86	13	1	14.6	47.7	77	-	-	1
134		57.5	46.5	72	26	2	12.6	42.7	78	-	-	1
166		63.5	52.6	75	23	2	13.0	48.8	75	-	-	1
174		63.0	52.6	76	22	2	13.0	49.3	70	-	-	1
178		63.0	52.4	78	20	2	13.7	49.3	75	-	-	1
189		63.5	46.7	68	30	2	12.6	48.9	76	-	-	1
195		63.0	48.8	67	30	3	12.5	49.8	83	-	-	2
211		62.5	52.6	82	17	1	13.0	49.8	76	-	-	1
181		60.0	48.1	75	24	1	11.1	44.7	74	-	-	1

(CONT'D.)





TABLE 16 (Cont'd.)

## QUALITY DATA ON SPECIAL TULELAKE FIELD

1971 CROP

STATION DURUM WHEAT NURSERY SAMPLES

CALIFORNIA

Variety or State Sel. No.	C.I. No.	T.W. 1/ #/Bu.	1000 Kwt. g.	Kernel Size		Wht. Pro. 2/ %	Pur. Semo. 3/ %	Dust Color Score 4/ %	Semo. Abs. 2/ %	Vis. Color	Gen. Eval. 5/ %	
				Lg.	Med. Sm.							
Tulelake (Cont'd.)												
557		62.5	55.2	82	16	2	14.2	48.9	93	34.0	9.0	3
568		63.0	50.2	61	37	2	12.7	47.7	86	-	-	2
587		63.0	48.5	68	30	2	13.3	50.2	89	35.3	9.5	4
598		62.2	52.4	80	18	2	15.3	48.6	88	35.0	9.5	4
591		59.0	46.1	74	24	2	12.5	47.2	87	-	-	2
220		62.0	43.3	70	28	2	13.7	48.6	85	-	-	2
223		62.0	47.8	80	18	2	15.4	49.1	86	-	-	2
234		63.0	46.9	73	26	1	13.0	47.9	78	-	-	1
243		62.5	48.3	78	20	2	14.5	48.2	80	-	-	2
247		63.0	50.0	82	17	1	13.4	48.2	86	-	-	2
262		63.5	46.9	75	23	2	13.4	48.6	91	36.0	9.5	4
238		63.0	48.3	77	21	2	13.8	46.3	77	-	-	1
281		63.5	47.4	76	23	1	13.9	49.1	85	-	-	2
310		63.5	45.2	68	31	1	14.0	50.0	85	-	-	2
312		63.0	51.5	84	15	1	15.3	50.5	81	-	-	2
317		63.5	47.8	76	22	2	14.6	50.2	87	-	-	2
325		63.2	48.5	82	16	2	15.1	48.9	84	-	-	2
298		62.0	47.6	79	19	2	13.1	46.1	82	-	-	2
363		62.5	49.0	78	20	2	15.2	50.2	75	-	-	1
371		63.0	55.2	79	19	2	13.6	50.7	84	-	-	2
333		61.0	44.6	66	32	2	13.7	47.7	70	-	-	1
395		63.0	55.2	79	19	2	13.4	50.2	83	-	-	2
409		65.0	55.2	88	11	1	14.6	48.9	83	-	-	2
411		61.5	54.0	85	14	1	12.5	47.2	84	-	-	2
427		63.0	53.5	78	20	2	13.4	50.0	85	-	-	2
435		63.0	49.8	80	19	1	12.1	49.3	81	-	-	2

(CONT'D.)

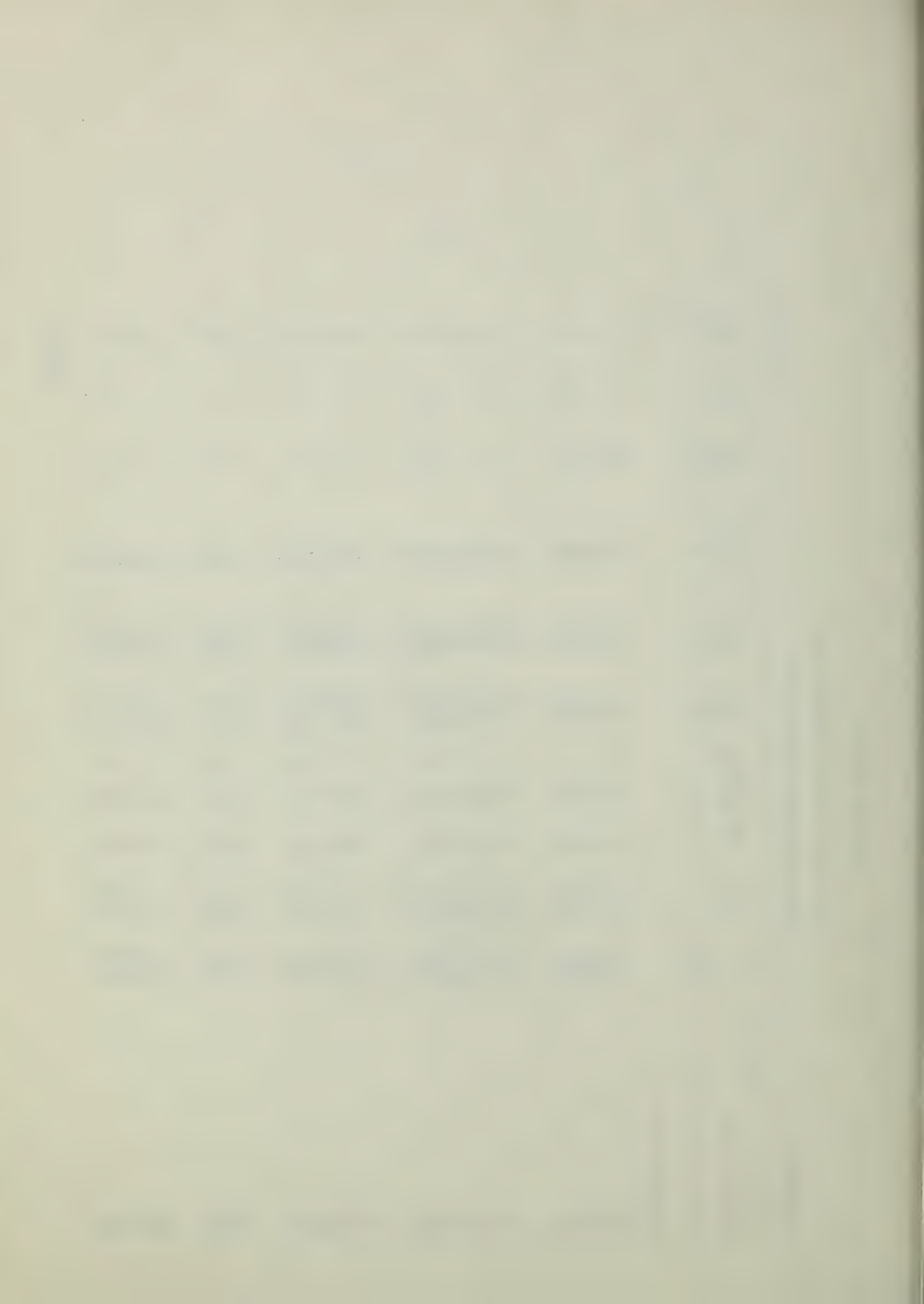


TABLE 16 (Cont'd.)

## QUALITY DATA ON SPECIAL TULELAKE FIELD

1971 CROP

## STATION DURUM WHEAT NURSERY SAMPLES

## CALIFORNIA

Variety or State Sel. No.	C.I. No.	T.W. 1/ #/Bu.	1000 Kwt.	Kernel Size		Wht. Pro. 2/ %	Pur. Semo. 3/ %	Dust Color Score 4/ %	Semo. Abs. 2/ %	Vis. Color	Gen. Eval. 5/ %
				Lg.	Med. Sm.						
Tulelake (Cont'd.)											
474		62.5	46.7	74	23	3	12.9	52.9	84	-	2
493		62.5	46.7	72	24	4	14.0	49.8	75	-	1
498		63.0	47.8	70	28	2	13.3	51.1	80	-	2
517		63.5	47.1	79	20	1	14.1	48.6	86	-	2
542		63.5	48.5	79	19	2	12.9	50.7	89	9.0	3
531		62.0	38.6	50	48	2	10.9	50.0	80	-	2
445		61.0	35.2	33	63	4	11.2	51.1	78	-	1
Leeds 111		65.0	43.9	63	35	2	11.4	52.5	90	9.5	4
Leeds 112		67.0	42.9	62	36	2	11.3	53.0	90	10.0	4

1/ Unofficial

2/ 14% moisture basis

3/ Purified

4/ Below 80 color score not acceptable, normally; however, due to the excellent color this crop year, the minimum score is 88.

5/ 1 - No Promise, 2 - Little Promise, 3 - Some Promise, 4 - Good Promise.





TABLE 17

## QUALITY DATA ON SPECIAL DURUM WHEAT NURSERY SAMPLES

WASHINGTON														PI LINE				1971 CROP			
Variety or State Sel. No.		C.I. No.	T.W. 1/ #/Bu.	1000 Kwt.	Kernel Size		Wht.		Pur.	Dust Color	Semo.	Vis.	Gen.								
					Lg.	Med. Sm.	Pro.	Semo.	Score	Abs.	Color	Eval.									
					%	%	%	3/ %	4/ %	2/ %		5/ %									
<u>Pullman</u>																					
Arnaud De Studina																					
PI 165102-1			62.0	56.5	81	17	2	11.7	54.4	80	35.3	8.5	2								
PI 165110-1			63.0	52.1	83	16	1	13.6	49.3	60	-	-	1								
PI 165116-6			64.0	51.3	81	18	1	12.4	52.1	60	-	-	1								
PI 165143			62.0	64.5	82	16	2	12.5	52.5	70	-	-	1								
PI 165152-3			62.0	72.5	88	10	2	12.4	54.4	60	-	-	1								
PI 165199-2			62.5	61.0	88	10	2	11.7	53.7	75	-	-	1								
PI 165202-1			62.0	61.3	88	10	2	12.4	53.9	75	-	-	1								
PI 165202-3			61.0	56.5	82	16	2	12.4	53.7	80	36.0	9.0	3								
PI 165206-2			63.0	62.5	85	13	2	11.8	53.7	80	-	-	2								
PI 165206-4			63.0	68.0	89	9	2	12.8	54.4	80	35.7	9.5	3								
PI 165210-5			62.0	66.6	87	11	2	12.3	52.8	78	-	-	1								
PI 165217-1			62.0	69.9	90	9	1	13.0	51.6	75	-	-	1								
PI 165217-4			63.5	62.5	92	7	1	14.1	48.8	75	-	-	1								
PI 165222-1			62.5	63.7	84	14	2	12.2	52.8	70	-	-	1								
PI 166226-3			62.0	68.0	86	12	2	12.6	54.6	75	-	-	1								
PI 166243-1			63.0	61.7	88	10	2	13.0	50.7	75	-	-	1								
PI 166327			63.5	60.6	86	12	2	12.0	52.8	85	-	-	2								
PI 166330			62.0	61.7	90	9	1	14.1	50.9	70	-	-	1								
PI 166349-2			63.0	52.1	85	13	2	13.6	51.2	70	-	-	1								
PI 166444-2			61.0	65.8	88	10	2	13.5	50.9	75	-	-	1								
PI 166466-1			64.0	56.5	83	16	1	12.8	49.8	75	36.7	7.5	1								
PI 166466-2			62.0	52.6	79	20	1	13.0	50.9	75	-	-	1								
PI 166466-3			63.0	54.6	80	18	2	13.5	52.9	75	38.0	8.5	2								
PI 166470			64.0	51.5	76	22	2	13.5	46.3	75	-	-	1								
PI 166485-4			-	50.8	-	-	-	13.1	48.3	75	-	-	1								
PI 166490-6			62.0	55.2	82	16	2	12.2	46.0	85	37.7	8.5	2								
PI 166491-1			63.0	54.3	75	22	3	12.8	47.5	80	-	-	2								
PI 166511			62.5	53.2	82	16	2	12.7	53.2	70	-	-	1								
PI 166528			62.5	51.0	79	19	2	13.6	52.3	75	-	-	1								
PI 166528			61.5	56.5	84	15	1	14.4	52.0	75	36.7	8.5	1								
(CONT'D.)																					

(CONT'D.)

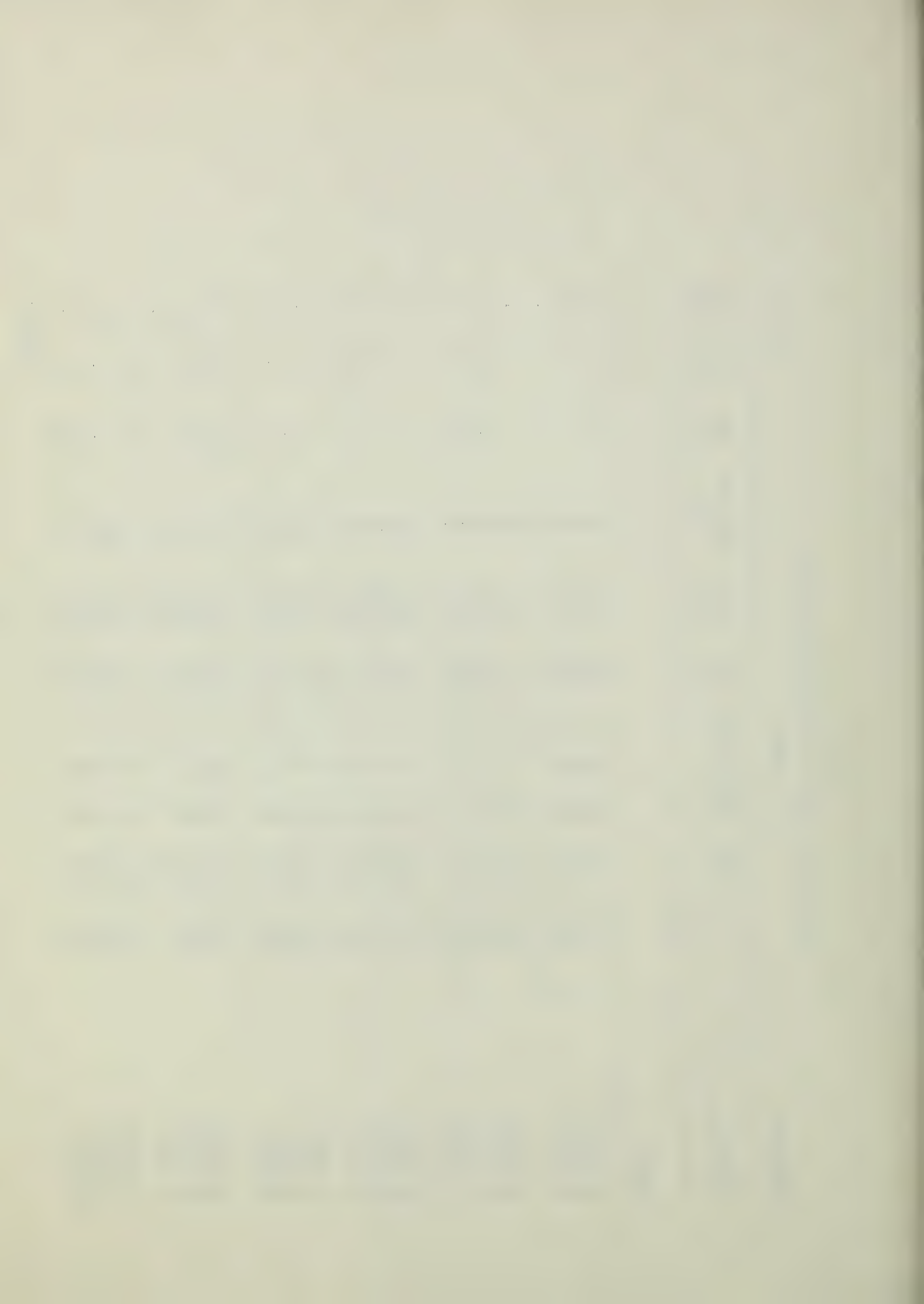


TABLE 17 (Cont'd.)

## QUALITY DATA ON SPECIAL DURUM WHEAT NURSERY SAMPLES

		PI LINE												1971 CROP	
Variety or State Sel. No.	C.I. No.	T.W. 1/ #/Bu.	1000 Kwt.	Kernel Size		Wht. Pro. 2/ %	Pur. Semo. 3/ %	Dust Color Score 4/ %	Semo. Abs. 2/ %	Vis. Color	Gen. Eval. 5/ %				
				Lg.	Med. Sm.										
Pullman (Cont'd.)															
PI 166681-1		61.5	64.5	87	12	1	14.3	51.1	80	36.3	8.5	2			
PI 166681-3		60.0	65.4	83	15	2	12.7	53.6	70	-	-	1			
PI 178058-2		60.5	62.9	80	17	3	12.9	54.8	80	-	-	2			
PI 178148		61.0	65.4	85	13	2	13.2	54.1	75	-	-	1			
PI 182899-2		60.0	62.5	86	12	2	13.0	53.9	75	-	-	1			
PI 182899-3		61.0	54.3	86	9	5	12.8	53.6	78	-	-	1			
PI 211671-1		60.5	62.1	84	15	1	13.3	51.6	80	-	-	2			
PI 221492-1		60.5	74.6	85	13	2	13.2	54.1	80	37.0	8.5	2			
PI 221492-2		60.0	81.3	86	13	1	13.3	53.9	80	-	-	2			
PI 221492-4		60.5	75.2	87	12	1	13.5	53.4	80	-	-	2			
PI 245585-2		60.5	63.7	84	13	3	13.0	54.9	80	-	-	2			
PI 245585-3		60.0	67.6	88	10	2	12.6	52.5	80	-	-	2			
PI 245585-6		60.0	67.6	88	10	2	13.0	53.4	80	-	-	2			
PI 245649-1		61.0	68.0	86	13	1	15.0	53.9	80	-	-	2			
PI 245649-2		61.0	63.3	85	13	2	15.2	54.1	80	36.7	8.5	2			
PI 245649-3		60.5	64.9	83	16	1	15.0	53.4	82	37.0	8.5	2			
PI 245649-4		60.5	63.3	83	15	2	15.9	53.2	80	36.7	8.5	2			
PI 245651-1		61.0	62.9	84	15	1	15.2	53.9	80	-	-	2			
PI 245651-2		61.0	63.7	82	16	2	15.6	54.8	85	37.0	8.5	2			
PI 245651-3		61.0	64.9	89	10	1	15.2	54.8	82	37.0	8.5	2			
PI 245651-4		61.5	66.7	88	11	1	15.1	55.3	85	-	-	2			
PI 271896-1		62.5	61.7	90	9	1	13.9	53.0	78	39.0	7.5	1			
PI 321741-3		61.0	56.8	84	15	1	15.0	52.3	70	-	-	1			
PI 321741-4		61.0	54.6	82	17	1	15.3	52.8	70	-	-	1			
PI 321743-1		57.5	68.5	70	29	1	12.9	54.6	70	-	-	1			
PI 321743-3		57.5	62.9	67	31	2	12.4	54.8	70	-	-	1			

1/ Unofficial

2/ 14% Moisture Basis

3/ Purified

4/ Below 80 color score not acceptable, normally; however, due to the excellent color this crop year, the minimum score is 88.

5/ 1 - No Promise, 2 - Little Promise, 3 - Some Promise, 4 - Good Promise.





TABLE 18

## QUALITY DATA ON SPECIAL DURUM WHEAT NURSERY SAMPLES

1971 CROP

## SPECIAL DURUM MUTANT SERIES

WASHINGTON

Variety or State Sel. No.	C.I. No.	T.W. 1/ #/Bu.	1000 Kwt. g.	Kernel Size		Wht. Pro. 2/ %	Pur. Semo. 3/ %	Dust Color Score 4/ %	Semo. Abs. 2/ %	Vis. Color	Gen. Eval. 5/ %
				Lg.	Med. Sm.						
Pullman											
Durum Mut. 1247 #1		64.0	39.2	43	56	1	13.0	51.4	-	-	2
Durum Mut. 1247 #2		63.5	36.8	35	64	1	11.9	52.5	-	-	3
Durum Mut. 1257 #1		62.0	40.5	58	41	1	13.5	50.9	-	-	1
Durum Mut. 1257 #2		60.5	39.2	57	42	1	13.9	50.0	-	-	1
Durum Mut. 1289 #1		64.5	43.1	57	42	1	13.1	49.8	-	-	2
Durum Mut. 1289 #2		64.0	38.9	43	56	1	13.3	50.0	-	-	2
Durum Mut. 1289 #3		64.5	42.6	62	37	1	13.5	50.5	-	-	2
Durum Mut. 1289 #4		64.0	43.7	51	48	1	13.4	51.1	-	-	2
Durum Mut. 1291 #1		63.0	46.1	53	46	1	12.4	53.2	-	-	2
Durum Mut. 1292 #1		64.0	42.7	55	44	1	12.6	55.0	34.7	9.5	3
Durum Mut. 1296 #1		63.5	44.8	61	38	1	13.6	52.3	35.7	9.5	3
Durum Mut. 1296 #2		64.0	48.5	74	25	1	14.3	49.5	34.3	10.0	4
Durum Mut. 1299 #1		65.5	46.9	69	30	1	14.2	51.8	34.7	9.5	3
Durum Mut. 1303 #1		65.5	46.7	65	34	1	12.3	53.8	-	-	2
Durum Mut. 1303 #2		65.0	45.2	65	34	1	12.5	52.7	-	-	2
Durum Mut. 1303 #3		65.0	35.1	61	38	1	12.9	52.7	-	-	2
Durum Mut. 1303 #4		64.0	45.2	59	40	1	12.4	53.6	-	-	2
Durum Mut. 1306 #1		65.0	45.7	55	44	1	13.1	51.8	-	-	2
Durum Mut. 1307 #1		64.5	44.1	61	38	1	14.1	50.9	-	-	2
Durum Mut. 1307 #2		64.0	42.9	63	36	1	13.3	52.5	-	-	2
Durum Mut. 1316 #1		66.0	41.3	47	52	1	12.6	52.5	-	-	3
Durum Mut. 1316 #2		66.5	38.6	45	54	1	12.4	53.2	-	-	2
Durum Mut. 1323 #1		64.5	42.4	31	68	1	12.2	53.2	-	-	2
Durum Mut. 1323 #2		64.5	39.2	28	71	1	13.2	52.3	-	-	2
Durum Mut. 1324 #1		65.0	41.7	60	39	1	14.9	52.0	33.7	10.0	4
Durum Mut. 1369 #1		65.5	44.1	63	36	1	13.1	51.8	-	-	3
Durum Mut. 1372 #1		64.5	37.7	48	49	3	13.9	53.2	37.0	10.0	4
Durum Mut. 1372 #2		64.5	34.7	37	60	3	12.5	53.4	33.3	10.0	4
Durum Mut. 1375 #1		65.5	42.7	65	34	1	14.2	52.3	-	-	2
Durum Mut. 1375 #2		65.0	42.6	69	30	1	14.8	51.8	-	-	2

(CONT'D.)



TABLE 18 (Cont'd.)

## QUALITY DATA ON SPECIAL DURUM WHEAT NURSERY SAMPLES

WASHINGTON

SPECIAL DURUM MUTANT SERIES

1971 CROP

Variety or State Sel. No.	C.I. No.	T.W. 1/ #/Bu.	1000 Kwt.	Kernel Size	Wht. Pro.	Pur. Semo.	Dust Color Score	Semo. Abs.	Vis. Color	Gen. Eval.
				Lg. Med. Sm.	2/ %	3/ %	4/ %	2/ %		5/ %
Pullman (Cont'd.)										
Durum Mut. 1375 #3		64.0	38.2	46 53 1	14.4	50.2	85	-	-	2
Durum Mut. 1376 #1		63.0	39.1	44 55 1	14.1	51.8	89	34.7	9.0	3
Durum Mut. 1376 #2		63.5	38.0	47 51 2	14.0	51.4	86	-	-	3
Durum Mut. 1376 #3		64.0	39.8	48 51 1	13.4	52.7	86	-	-	3
Durum Mut. 1376 #4		64.0	38.2	44 55 1	13.7	52.7	86	-	-	3
Durum Mut. 1376 #5		63.0	41.2	57 42 1	13.7	52.3	85	-	-	2
Durum Mut. 1378 #1		63.5	40.2	45 51 4	11.0	53.2	83	-	-	2
Durum Mut. 1378 #2		63.5	37.7	24 73 3	11.5	50.9	85	-	-	2
Durum Mut. 1378 #3		64.5	37.3	42 55 3	11.4	53.6	85	-	-	2
Durum Mut. 1378 #4		64.0	36.6	28 69 3	11.2	52.0	85	-	-	2
Durum Mut. 1378 #5		63.5	39.4	45 53 2	11.7	52.7	87	-	-	3
Durum Mut. 1378 #6		64.0	39.8	41 57 2	11.3	54.1	83	-	-	2
Durum Mut. 1378 #7		63.0	37.7	29 67 4	11.8	51.4	83	-	-	2
Durum Mut. 1379 #1		63.0	40.2	43 56 1	13.0	51.1	82	-	-	2
Durum Mut. 1379 #2		63.5	45.2	53 46 1	12.0	51.4	83	-	-	2
Durum Mut. 1381 #1		61.0	36.1	27 69 4	12.4	52.0	90	32.7	10.5	4
Durum Mut. 1381 #2		61.5	31.9	10 86 4	12.3	50.5	89	35.7	10.5	4
Durum Mut. 1381 #3		61.5	34.1	25 71 4	11.7	50.7	83	-	-	2
Durum Mut. 1381 #4		61.0	31.6	11 82 7	12.5	51.8	90	34.0	10.5	4
Durum Mut. 1381 #5		61.5	34.8	19 76 5	12.8	51.4	85	-	-	2
Durum Mut. 1381 #6		62.0	33.8	18 77 5	11.4	50.5	86	-	-	3
Durum Mut. 1381 #7		61.0	32.8	12 82 6	12.1	52.0	86	-	-	3
Durum Mut. 1381 #8		61.5	31.9	11 84 5	12.8	51.6	85	-	-	2
Durum Mut. 1383 #1		63.5	37.7	32 65 3	11.8	52.7	80	-	-	2
Durum Mut. 1383 #2		60.0	31.8	21 74 5	12.7	52.0	95	34.7	10.5	4
Durum Mut. 1383 #3		62.0	34.2	23 71 6	11.3	51.8	82	-	-	2
Durum Mut. 1383 #4		62.5	37.3	28 67 5	11.6	52.5	82	-	-	2
Durum Mut. 1383 #5		64.0	39.2	39 57 4	11.5	54.1	83	-	-	2
Durum Mut. 1383 #6		62.0	38.2	29 67 4	12.8	51.1	83	-	-	2
Durum Mut. 1385 #1		62.5	45.8	51 46 3	11.9	50.5	82	-	-	2

(CONT'D.)

(CONT'D.)





TABLE 18 (Cont'd.)

## QUALITY DATA ON SPECIAL DURUM WHEAT NURSERY SAMPLES

1971 CROP

## SPECIAL DURUM MUTANT SERIES

WASHINGTON

Variety or State Sel. No.	C.I. No.	T.W. 1/ #/Bu.	1000 Kwt.	Kernel		Wht. Pro. 2/ %	Pur. Semo. 3/ %	Dust Color Score 4/ %	Semo. Abs. 2/ %	Vis. Color	Gen. Eval. 5/ %
				Lg.	Med. Sm.						
				%	%	%	%				
<u>Pullman (Cont'd.)</u>											
Durum Mut. 1385 #2		63.0	37.0	19	76	5	10.2	52.0	-	-	2
Durum Mut. 1385 #3		61.5	36.1	17	78	5	11.8	50.5	-	-	2
Durum Mut. 1385 #4		65.0	41.5	51	46	3	11.5	52.7	-	-	2
Durum Mut. 1385 #5		63.0	38.9	27	68	5	10.8	51.1	-	-	2
Durum Mut. 1385 #6		64.0	41.2	45	52	3	11.8	54.0	-	-	2
Durum Mut. 1385 #7		63.5	40.8	35	62	3	10.8	50.5	-	-	2
Durum Mut. 1385 #8		63.0	40.5	38	59	3	11.4	52.0	-	-	2
Durum Mut. 1385 #9		62.5	35.6	35	60	5	11.1	52.0	-	-	2
Durum Mut. 1385 #10		64.0	41.0	41	56	3	11.1	48.6	-	-	2
Durum Mut. 1385 #11		62.5	36.4	25	73	3	11.0	50.9	-	-	2
Durum Mut. 1385 #12		62.0	32.4	13	82	5	11.8	51.6	-	-	3
Durum Mut. 1386 #1		64.0	36.2	19	77	4	10.7	50.9	-	-	1
Durum Mut. 1386 #2		64.0	39.7	46	51	3	11.5	51.4	-	-	2
Durum Mut. 1386 #3		63.0	40.5	40	57	3	11.8	49.6	-	-	2
Durum Mut. 1386 #4		64.5	37.5	33	64	3	10.8	50.0	-	-	2
Durum Mut. 1386 #5		61.5	32.8	15	79	6	11.2	51.1	34.7	10.0	4
Durum Mut. 1386 #6		63.0	35.7	26	69	5	10.8	51.4	-	-	3

1/ Unofficial

2/ 14% Moisture Basis

3/ Purified

4/ Below 80 color score not acceptable, normally; however, due to the excellent color this crop year, the minimum score is 88.

5/ 1 - No Promise, 2 - Little Promise, 3 - Some Promise, 4 - Good Promise.



TABLE 19

## QUALITY DATA ON SPECIAL DURUM WHEAT NURSERY SAMPLES

1971 CROP

## SPECIAL K6800707 MUTANT SERIES

WASHINGTON

Variety or State Sel. No.	C.I. No.	T.W. 1/ #/Bu.	1000 Kwt.	Kernel Size		Wht. Pro. 2/ %	Pur. Semo. 3/ %	Dust Color Score 4/ %	Semo. Abs. 2/ %	Vis. Color	Gen. Eval. 5/ %
				Lg.	Med. Sm.						
<u>Pullman</u>											
K6800707 Mut. #1		65.0	49.3	80	19	1	13.0	53.4	87	-	3
K6800707 Mut. #2		63.0	32.3	16	77	7	10.5	53.2	82	-	2
K6800707 Mut. #3		63.5	42.7	63	36	1	12.9	51.8	85	-	2
K6800707 Mut. #4		64.0	41.2	63	36	1	14.1	53.0	92	34.7	4
K6800707 Mut. #5		62.0	37.9	57	40	3	13.5	49.3	87	-	3
K6800707 Mut. #6		63.5	44.1	68	30	2	12.7	50.0	89	35.7	3
K6800707 Mut. #7		62.2	42.2	58	41	1	12.8	49.5	90	36.0	4
K6800707 Mut. #8		63.3	41.0	58	41	1	15.0	51.1	92	35.0	4
K6800707 Mut. #9		65.0	51.3	84	15	1	12.3	51.6	80	-	2
K6800707 Mut. #10		61.2	44.4	65	34	1	14.0	49.1	80	-	2
K6800707 Mut. #11		63.5	38.2	35	61	4	11.2	52.5	78	-	1
K6800707 Mut. #12		63.0	41.8	61	37	2	11.8	50.2	83	-	2
K6800707 Mut. #13		64.0	43.1	66	33	1	13.8	51.4	96	36.0	4
K6800707 Mut. #14		64.7	43.7	71	28	1	14.5	51.6	96	36.0	4
K6800707 Mut. #15		64.0	39.5	58	41	1	14.4	50.9	94	35.7	4
K6800707 Mut. #16		63.5	36.1	47	51	2	12.8	50.9	96	38.0	4
K6800707 Mut. #17		64.0	50.3	79	20	1	13.7	48.9	85	-	2
K6800707 Mut. #18		65.0	43.1	60	39	1	13.0	53.4	97	35.3	4
K6800707 Mut. #19		64.0	43.7	61	36	3	11.8	48.9	85	-	2
K6800707 Mut. #20		63.0	36.5	28	67	5	11.7	50.0	80	-	2

(CONT'D.)





TABLE 19 (Cont'd.)

## QUALITY DATA ON SPECIAL DURUM WHEAT NURSERY SAMPLES

1971 CROP

## SPECIAL K6800707 MUTANT SERIES

WASHINGTON

Variety or State Sel. No.	C.I. No.	T.W. 1/ #/Bu.	1000 Kwt.	Kernel		Wht. Pro. 2/ %	Pur. Semo. 3/ %	Dust Color Score 4/ %	Semo. Abs. 2/ %	Vis. Color	Gen. Eval. 5/ %
				Lg.	Med. Sm.						
				%	%						
<u>Pullman (Cont'd.)</u>											
K6800707 Mut. #21		64.5	42.6	68	31	1	13.8	52.1	93	35.0	10.5
K6800707 Mut. #22		63.5	46.7	69	30	1	13.3	50.0	85	-	-
K6800707 Mut. #23		63.5	49.5	77	22	1	13.4	49.8	85	-	-
K6800707 Mut. #24		64.0	38.3	39	58	3	12.4	53.9	80	-	-
K6800707 Mut. #25		63.5	43.3	70	29	1	13.0	50.5	96	37.7	10.0
K6800707 Mut. #26		63.5	36.9	29	66	5	12.8	52.7	85	-	-
K6800707 Mut. #27		62.5	38.2	46	52	2	13.1	49.8	100	37.3	10.5
K6800707 Mut. #28		62.5	47.8	75	25	0	15.4	46.8	85	-	-
K6800707 Mut. #29		63.0	40.5	49	50	1	13.1	49.3	85	-	-
K6800707 Mut. #30		62.0	49.3	81	18	1	15.8	48.9	85-R	-	-
K6800707 Mut. #31		64.0	46.3	35	64	1	13.7	51.8	98	35.3	10.5
K6800707 Mut. #32		63.5	44.8	68	31	1	14.5	51.4	97	35.0	10.5
K6800707 Mut. #33		63.0	35.3	48	51	1	15.3	49.5	98	35.7	10.5
K6800707 Mut. #34		64.0	42.4	63	36	1	13.5	53.2	90	35.3	10.5

1/ Unofficial

2/ 14% Moisture Basis

3/ Purified

4/ Below 80 color score not acceptable, normally; however, due to the excellent color this crop year, the minimum score is 88.

5/ 1 - No Promise, 2 - Little Promise, 3 - Some Promise, 4 - Good Promise.



TABLE 20

# QUALITY DATA ON SPECIAL DURUM WHEAT SAMPLES

1971 CROP

FROM REGULAR DURUM NURSERY 1970 NORTH DAKOTA

WASHINGTON

[illegible]





TABLE 21

## QUALITY DATA ON SPECIAL DURUM WHEAT NURSERY SAMPLES

1971 CROP

SPECIAL 50 g. SAMPLES

WASHINGTON

Variety or State Sel. No.	1000 Kwt.	Dust Color Score 1/	Gen. Eval. 2/	Variety or State Sel. No.	1000 Kwt.	Dust Color Score 1/	Gen. Eval. 2/
g.							
<u>Pullman</u>							
K680070 Mut. #35	43.3	97	4	Durum Mut. 1296-3	45.5	85	2
K680070 Mut. #36	41.3	83	2	Durum Mut. 1296-4	46.9	87	3
K680070 Mut. #37	41.0	86	3	Durum Mut. 1306-2	41.8	70	1
K680070 Mut. #38	41.3	78	1	Durum Mut. 1306-3	39.1	89	3
K680070 Mut. #39	48.1	96	4	Durum Mut. 1316-3	38.6	75	1
K680070 Mut. #40	44.2	75	1	Durum Mut. 1324-2	44.1	89	3
K680070 Mut. #41	35.1	76	1	Durum Mut. 1369-2	38.5	82	2
K680070 Mut. #42	38.5	96	4	Durum Mut. 1375-4	38.2	80	2
K680070 Mut. #43	48.3	83	2	NDD 63152-12-3	33.8	85	2
K680070 Mut. #44	45.5	97	4	NDD 63152-24-1	45.0	88	3
K680070 Mut. #45	44.4	102	4	NDD 63152-26-1	40.7	85	2
K680070 Mut. #46	38.0	70	1	NDD 63152-26-2	44.4	85	2
K680070 Mut. #47	37.9	104	4	NDD 64056-12-1	39.8	82	2
K680070 Mut. #48	38.8	97	4	NDD 64056-12-2	41.7	85	2
K680070 Mut. #49	39.4	65	1	NDD 64056-12-3	40.2	83	2
K680070 Mut. #50	35.6	105	4	NDD 64115-52-1	41.0	90	3
K680070 Mut. #51	33.1	105	4	NDD 64127-99-2	46.1	90	3
K680070 Mut. #52	37.7	100	4	NDD 64150-59-1	39.8	90	3
K680070 Mut. #53	44.4	104	4	NDD 64150-59-2	42.0	80	2
K680070 Mut. #54	47.6	75	1	NDD 64150-59-3	40.5	87	3
K680070 Mut. #55	40.5	96	4	NDD 64150-94-1	38.3	80	2
K680070 Mut. #56	38.9	95	4	NDD 64150-94-2	43.3	82	2
K680070 Mut. #57	41.8	102	4	NDD 64150-94-3	42.0	85	2
K680070 Mut. #58	44.4	97	4				
K680070 Mut. #59	45.2	97	4				
K680070 Mut. #60	46.7	85	2				
K680070 Mut. #61	40.7	85	2				
K680070 Mut. #62	35.2	97	4				

1/ Below 80 color score not acceptable, normally; however, due to the excellent color this crop year, the minimum score is 88.  
 2/ 1 - No Promise, 2 - Little Promise, 3 - Some Promise, 4 - Good Promise.



TABLE 22

## QUALITY DATA ON SPECIAL DURUM WHEAT NURSERY SAMPLES

## FROM CHILEAN DURUM NURSERY

1971 CROP

WASHINGTON

Variety or State Sel. No.	C.I. No.	T.W. #/Bu.	1000 Kwt.	Kernel Size		Wht. Pro. 2/	Pur. Semo. 3/	Dust Color Score 4/	Semo. Abs. 2/	Vis. Color	Gen. Eval. 5/
				Lg.	Med.	Sm.					
			g.	%	%	%	%	%	%		
<u>Royal Slope</u>											
CHD 70101		63.5	53.8	75	33	2	12.1	51.4	70	35.7	7.0 1
CHD 70105		62.0	62.5	85	14	1	14.4	51.4	75-R	37.7	8.0-R 1
CHD 70111		62.5	52.4	78	21	1	13.2	49.5	80	39.3	8.5 2
CHD 70113		62.0	55.6	70	28	2	13.1	53.2	70	38.3	7.0 1
CHD 70120		62.0	59.9	83	16	1	14.4	52.3	75-R	39.0	7.5-R 1

1/ Unofficial

2/ 14% moisture basis

3/ Purified

4/ Below 80 color score not acceptable, normally; however, due to the excellent color this crop year, the minimum score is 88. R - Red.

5/ 1 - No Promise, 2 - Little Promise, 3 - Some Promise, 4 - Good Promise.





TABLE 23

## QUALITY DATA ON UNIFORM REGIONAL DURUM WHEAT NURSERY SAMPLES

MINNESOTA

1971 CROP

Variety or State Sel. No.	C.I. No.	T.W. #/Bu.	1000 Kwt.	Kernel Lg. Med. Sm.	Wht. Pro. 2/	Pur. Semo. 3/	Dust Color Score 4/	Semo. Abs. 2/	Vis. Color	Gen. Eval. 5/
			g.	%	%	%	%	%		
<u>Crookston</u>										
Hercules		62.0	45.0	56	43	1	12.4	53.3	89	34.3
Lakota	13335	63.5	39.2	39	58	3	11.4	53.6	88	35.0
Leeds	13768	65.5	43.9	55	44	1	12.8	54.9	93	33.0
Mindum	5296	65.0	47.6	70	28	2	11.5	55.7	84	-
Rolette		64.5	47.8	80	19	1	13.7	56.2	85	34.0
Wascana		60.5	48.5	76	23	1	12.7	52.1	92	35.3
Wells	13333	64.5	37.0	39	58	3	12.6	54.4	89	33.7
DT 327		62.0	47.6	70	29	1	11.4	54.4	93	35.0
D6647		64.0	41.0	33	66	1	11.1	52.3	85	-
D6674		64.5	47.1	65	34	1	12.5	56.9	88	33.7
D6676		62.0	44.4	60	39	1	12.7	54.4	88	33.3
D6714		64.5	45.0	65	34	1	12.5	55.4	87	-
D6715		64.5	46.9	70	29	1	12.7	54.6	87	-
D6718		65.0	46.1	69	30	1	11.9	53.8	85	-
D6721		63.0	45.7	61	38	1	12.1	54.4	85	-
D6722		64.0	42.6	55	43	2	12.5	52.0	90	33.0
D6723		64.0	43.7	63	36	1	11.9	54.6	90	33.3
D6733		62.0	44.8	71	28	1	12.2	55.4	85	-
D6761		62.0	46.5	69	30	1	12.2	54.4	85	-
D6838		62.0	46.9	63	34	3	11.5	54.4	75	-
D6876		63.0	42.7	59	40	1	12.3	52.8	86	-

1/ Unofficial

2/ 14% Moisture Basis

3/ Purified

4/ Below 80 color score not acceptable, normally; however, due to the excellent color this crop year, the minimum score is 88.

5/ 1 - No Promise, 2 - Little Promise, 3 - Some Promise, 4 - Good Promise.



TABLE 24

## QUALITY DATA ON UNIFORM REGIONAL DURUM WHEAT NURSERY SAMPLES

MINNESOTA

1971 CROP

Variety or State Sel. No.	C.I. No.	T.W. 1/ #/Bu.	1000 Kwt. g.	Kernel Lg. Med. Sm. % % %	Wht. Pro. 2/ %	Pur. Semo. 3/ %	Dust Color Score 4/ %	Semo. Abs. 2/ %	Vis. Color	Gen. Eval. 5/ %		
Morris												
Hercules		62.5	38.9	44	53	3	12.8	54.6	91	34.0	10.0	4
Lakota	13335	61.0	30.7	9	85	6	12.7	51.5	93	36.3	10.0	4
Leeds	13768	63.5	33.7	15	82	3	13.4	52.6	94	34.7	10.0	4
Mindum	5296	62.5	37.3	36	59	5	11.7	52.0	80	-	-	2
Rolette		63.5	36.5	27	69	4	13.1	53.6	91	34.0	10.0	4
Wascana												
Wells	13333	57.5	32.4	16	79	5	15.1	47.7	100	34.3	10.5	4
DT 327		62.0	29.1	7	86	7	12.8	52.6	93	33.7	10.0	4
D6647		60.5	30.0	11	83	6	12.8	52.5	96	35.7	10.5	4
D6674		63.0	37.0	18	77	5	11.9	54.1	86	-	-	3
		63.0	37.9	27	68	5	12.5	53.3	94	34.0	10.0	4
D6676												
D6714		64.0	37.9	35	62	3	12.5	53.6	93	33.7	10.0	4
D6715		63.0	37.9	38	59	3	12.2	53.1	87	-	-	3
D6718		63.5	37.2	37	60	3	12.4	54.8	91	34.7	10.0	4
D6721		63.0	38.8	29	67	4	13.0	54.7	89	36.7	10.0	4
		62.5	36.2	19	77	4	12.8	53.8	89	33.7	10.0	4
D6722												
D6723		63.0	37.6	33	63	4	12.9	52.8	92	33.7	10.5	4
D6733		62.0	34.7	29	67	4	12.9	53.3	94	35.7	10.0	4
D6761		63.0	35.7	25	71	4	12.9	55.8	92	36.0	10.0	4
D6838		63.5	38.8	37	59	4	12.3	54.6	90	34.0	10.0	4
		62.5	35.1	13	81	6	11.9	53.3	85	-	-	2
D6876												
		63.0	34.1	23	73	4	12.6	53.0	90	34.7	10.0	4

1/ Unofficial

2/ 14% Moisture Basis

3/ Purified

4/ Below 80 color score not acceptable, normally; however, due to the excellent color this crop year, the minimum score is 88.

5/ 1 - No Promise, 2 - Little Promise, 3 - Some Promise, 4 - Good Promise.



TABLE 25

## QUALITY DATA ON UNIFORM REGIONAL DURUM WHEAT NURSERY SAMPLES

MINNESOTA

1971 CROP

Variety or State Sel. No.	C. I. No.	T. W. 1/ #/Bu.	1000 Kwt.	Kernel Size			Wht. Pro. 2/ %	Pur. Semo. 3/ %	Dust Color Score 4/ %	Semo. Abs. 2/ %	Vis. Color	Gen. Eval. 5/ %
				Lg.	Med.	Sm.						
St. Paul												
Hercules		59.0	38.6	33	64	3	14.2	50.5	87	-	-	3
Lakota	13335	59.0	30.8	9	86	5	13.7	49.0	90	34.0	10.0	4
Leeds	13768	61.0	34.8	24	73	3	15.4	49.7	90	32.3	10.0	4
Mindum	5296	60.0	38.5	36	60	4	13.0	51.0	80	-	-	2
Rolette		61.5	36.4	33	64	3	14.3	52.1	85	33.0	10.0	3
Wascana		58.0	37.7	38	59	3	15.0	48.0	90-G	34.7	10.0	4
Wells	13333	61.0	30.3	12	82	6	14.2	48.7	85	-	-	3
DT 327		60.0	36.0	36	61	3	14.0	50.3	95	37.0	10.0	4
D6647		60.0	33.0	12	82	6	13.7	51.5	83	-	-	2
D6674		59.5	36.6	31	64	5	14.2	48.7	90	34.7	9.5	4
D6676		60.0	36.6	29	66	5	14.8	50.0	91	35.3	9.5	4
D6714		60.5	37.5	32	64	4	13.7	51.3	87	-	-	3
D6715		60.0	37.2	29	66	5	14.1	49.5	90	34.7	10.0	4
D6718		61.0	36.5	31	66	3	14.8	49.7	90	35.0	10.0	4
D6721		60.0	38.3	35	59	6	14.3	50.8	90-G	35.3	9.5	4
D6722		60.5	38.0	35	62	3	14.1	50.3	92	33.7	10.0	4
D6723		60.0	36.0	40	57	3	14.2	50.3	90	33.7	9.5	4
D6733		60.5	36.0	30	67	3	15.1	50.3	88	35.3	9.0	4
D6761		60.5	38.6	37	58	5	13.7	52.8	89	34.0	9.5	4
D6838		61.0	32.1	10	83	7	13.6	49.5	82	-	-	2
D6876		62.0	33.4	25	72	3	14.1	50.8	90	35.3	9.0	4

1/ Unofficial

2/ 14% Moisture Basis

3/ Purified

4/ Below 80 color score not acceptable, normally; however, due to the excellent color this crop year, the minimum score is 88. G - Gray.

5/ 1 - No Promise, 2 - Little Promise, 3 - Some Promise, 4 - Good Promise.





TABLE 26

## QUALITY DATA ON UNIFORM REGIONAL DURUM WHEAT NURSERY SAMPLES

NORTH DAKOTA

1971 CROP

Variety or State Sel. No.	C.I. No.	T.W. #/Bu.	1000 Kwt.	Kernel Size			Wht. Pro.	Pur. Semo.	Dust Color Score	Semo. Abs.	Vis. Color	Gen. Eval.
				Lg.	Med.	Sm.						
				%	%	%	2/ %	3/ %	4/ %	2/ %		5/ %
Fargo												
Hercules		60.9	41.6	50	46	4	12.8	53.9	88	33.3	9.5	4
Leeds	13335	62.3	36.1	20	73	7	13.3	51.7	93	32.5	10.0	4
Mindum	5296	60.5	34.8	17	74	9	12.9	51.5	85	33.2	9.0	3
Rolette		60.0	39.4	41	55	4	13.4	51.2	85	32.3	9.0	3
Wascana		58.6	40.3	46	50	4	13.9	48.5	98	34.1	9.5	4
Wells	13333	58.6	29.0	14	76	10	13.1	50.1	87	32.3	9.5	4
DT 327		60.5	37.0	43	51	6	12.5	50.5	95	34.0	9.0	3
D6647		60.0	34.8	17	76	7	12.2	49.4	83	32.9	8.0	2
D6674		60.8	38.4	33	61	6	12.9	50.3	93	32.8	10.0	4
D6676		61.6	37.3	30	65	5	13.0	51.4	95	32.7	10.0	4
D6714		61.4	37.4	40	54	6	12.3	50.7	92	32.3	9.5	4
D6715		61.3	38.9	38	57	5	12.5	50.8	89	33.2	9.0	3
D6718		61.0	37.1	25	70	5	13.0	50.5	89	33.4	9.0	3
D6721		60.3	37.3	30	65	5	13.4	51.6	85	32.3	9.5	3
D6722		60.3	36.9	32	63	5	12.7	50.9	97	32.8	10.0	4
D6723		61.6	37.6	46	50	4	12.8	51.4	88	32.1	9.5	4
D6733		61.3	36.2	29	66	5	12.6	51.5	86	32.6	9.0	3
D6761		60.1	40.2	43	53	4	12.7	51.0	90	33.2	9.0	3
D6821		60.8	37.4	24	70	6	12.3	50.7	82	31.6	8.5	2
D6838		59.9	36.5	21	73	6	12.4	51.4	80	32.7	8.0	2
D6876		59.5	33.0	16	77	7	13.0	51.4	89	32.0	9.0	3
D6878		60.3	38.4	44	52	4	13.7	50.8	85-R	35.0	8.5	1

1/ Unofficial

2/ 14% Moisture Basis

3/ Purified

4/ Below 80 color score not acceptable, normally; however, due to the excellent color this crop year, the minimum

5/ 1 - No Promise, 2 - Little Promise, 3 - Some Promise, 4 - Good Promise. score is 88. R - Red.



TABLE 27

## QUALITY DATA ON UNIFORM REGIONAL DURUM WHEAT NURSERY SAMPLES

1971 CROP

## NORTH DAKOTA

Variety or State Sel. No.	C.I. No.	T.W. 1/ #/Bu.	1000 Kwt. g.	Kernel Size			Wht. Pro. 2/ %	Pur. Semo. 3/ %	Dust Color Score 4/ %	Semo. Abs. 2/ %	Vis. Color	Gen. Eval. 5/ %
				Lg.	Med.	Sm.						
Langdon												
Hercules	13768 5296	62.8	47.4	69	29	2	10.9	50.6	88	33.2	9.0	3
Leeds		62.1	42.1	46	51	3	11.8	49.2	96	31.8	10.0	4
Mindum		60.8	41.1	27	69	4	11.9	49.2	82	32.4	9.0	2
Rollette		62.8	47.0	60	38	2	12.0	50.7	90	31.9	9.5	4
Wascana		61.0	46.1	68	30	2	11.5	49.7	95	34.0	9.5	4
Wells	13333	61.4	35.8	28	67	5	10.6	48.3	83	31.9	9.0	3
DT 327		62.0	43.1	61	37	2	11.5	50.7	89	33.2	9.0	3
D6647		61.3	42.1	42	55	3	11.6	46.9	82	31.4	8.5	2
D6674		61.2	45.5	65	33	2	13.0	49.4	89	31.8	9.5	4
D6676		62.1	43.3	54	44	2	12.4	48.7	85	32.0	9.0	3
D6714		61.8	43.2	51	46	3	11.9	46.0	90	32.1	9.0	4
D6715		62.1	42.2	49	48	3	11.6	48.6	93	32.1	9.5	4
D6718		61.5	43.3	49	49	2	12.1	48.0	85	32.9	9.0	3
D6721		61.9	46.0	62	36	2	11.2	49.0	88	32.1	9.0	3
D6722		60.8	43.2	50	47	3	12.5	48.1	93	31.9	9.5	4
D6723		62.4	44.6	62	36	2	11.8	49.3	85	32.7	9.0	3
D6733		62.5	40.5	46	52	2	12.6	48.3	85	32.2	8.5	2
D6761		61.5	45.6	59	39	2	11.7	48.4	89	31.6	9.5	4
D6821		62.4	45.6	57	41	2	11.1	50.0	80	32.6	8.5	2
D6838		60.5	41.4	33	64	3	12.0	49.6	80	32.5	8.0	1
D6876		62.1	41.2	46	52	2	11.8	49.1	85	31.9	9.0	3
D6878		62.3	44.8	63	36	1	11.9	48.5	88	33.1	9.0	3

1/ Unofficial

2/ 14% Moisture Basis

3/ Purified

4/ Below 80 color score not acceptable, normally; however, due to the excellent color this crop year, the minimum score is 88.

5/ 1 - No Promise, 2 - Little Promise, 3 - Some Promise, 4 - Good Promise.





# QUALITY DATA ON UNIFORM REGIONAL DURUM WHEAT NURSERY SAMPLES

1971 CROP

Variety or State Sel. No.	C.I. No.	T.W. 1/ #/Bu.	1000 Kwt. g.	Kernel Size		Wht. Pro. 2/ %	Pur. Semo. 3/ %	Dust Color Score 4/ %	Semo. Abs. 2/ %	Vis. Color 5/ %	Gen. Eval.
				Lg.	Med. Sm.						
Eureka											
Hercules											
Leeds	13768	60.5	37.3	36	61	3	13.8	53.4	92	36.0	9.5
Mindum	5296	61.5	34.2	16	80	4	14.6	52.1	96	34.3	10.0
Rolette		60.5	35.3	17	79	4	13.9	52.4	87	-	-
Wascana		61.5	36.4	27	69	4	14.3	53.9	93	35.7	10.0
		57.0	31.5	14	82	4	15.3	51.1	102	37.0	10.0
Wells	13333	59.0	29.7	4	88	8	14.2	51.5	98	36.0	9.5
DT 327		59.5	27.5	15	81	4	13.9	51.8	99	37.0	10.0
D6647		57.5	30.9	3	82	15	13.8	48.9	96-G	37.3	9.5
D6674		60.5	39.7	22	74	4	14.1	53.4	98	36.3	9.5
D6676		61.0	36.4	17	80	3	14.1	53.7	98	36.3	9.5
D6714		61.5	36.8	24	73	3	14.1	53.7	94	35.7	10.0
D6715		62.0	37.0	21	76	3	13.8	53.7	95	36.0	10.0
D6718		60.5	34.2	10	85	5	14.0	53.2	97	36.7	9.5
D6721		60.5	36.0	19	87	4	14.0	53.2	93	35.0	9.5
D6722		57.0	39.2	24	73	3	14.0	52.9	98	34.0	10.0
D6723		61.5	37.5	29	66	5	13.7	54.2	97	33.7	10.0
D6733		61.0	31.9	11	84	5	14.3	53.2	97	36.0	10.0
D6761		61.5	37.9	35	62	3	13.4	55.3	95	36.7	9.5
D6838		61.0	34.6	8	87	5	13.2	53.2	90	37.3	9.0
D6876		60.0	33.1	11	83	6	14.0	52.1	100	37.3	10.0

1/ Unofficial  
2/ 14% Moisture Basis  
3/ Purified  
4/ Below 80 color score not acceptable, normally; however, due to the excellent color this crop year, the minimum score is 88. G - Gray.  
5/ 1 - No Promise, 2 - Little Promise, 3 - Some Promise, 4 - Good Promise.



TABLE 29

## QUALITY DATA ON UNIFORM REGIONAL DURUM WHEAT NURSERY SAMPLES

1971 CROP												
SOUTH DAKOTA												
Variety or State Sel. No.	C.I. No.	T.W. 1/ #/Bu.	1000 Kwt.	Kernel Size		Wht. Pro. 2/ %	Pur. Semo. 3/ %	Dust Color Score 4/ %	Semo. Abs. 2/ %	Vis. Color	Gen. Eval. 5/ %	
			g.	%	%	%	%		%			
Watertown												
Hercules		63.0	29.2	45	53	2	13.9	55.1	91	35.3	9.5	4
Leeds	13768	62.0	34.6	11	86	3	14.7	53.2	94	33.7	10.0	4
Mindum	5296	61.5	35.3	17	80	3	14.2	54.0	85	-	-	2
Rollette		62.5	36.6	24	74	2	14.5	54.3	88	35.7	9.0	3
Wascana		60.0	38.9	34	64	2	15.6	51.6	99	35.7	10.0	4
Wells	13333	61.0	31.2	7	87	6	14.4	52.4	95	33.3	9.5	4
DT 327		61.0	32.6	19	78	3	14.6	53.7	97	36.0	10.0	4
D6647		61.5	33.0	7	89	4	14.0	54.2	93	36.0	9.5	4
D6674		62.5	36.9	25	72	3	14.5	53.7	93	34.7	9.0	3
D6676		62.5	35.3	17	81	2	14.6	53.7	96	34.3	10.0	4
D6714		61.5	35.8	23	74	3	14.1	53.2	94	33.7	10.0	4
D6715		62.0	35.5	26	71	3	14.2	53.7	94	34.3	10.0	4
D6718		62.5	35.0	13	84	3	14.4	52.4	95	33.7	10.0	4
D6721		63.0	37.5	21	77	2	13.9	54.7	90	34.3	9.5	3
D6722		62.5	36.5	19	78	3	14.5	53.7	98	34.0	9.5	4
D6723		61.5	33.6	19	77	4	15.2	53.4	97	33.7	9.5	4
D6733		62.5	33.4	18	79	3	14.7	54.5	97	34.3	10.0	4
D6761		62.0	37.7	28	70	2	14.7	53.7	92	34.7	10.0	4
D6838		61.5	33.4	9	87	4	14.3	53.4	86	-	-	2
D6876		61.0	28.9	5	89	6	14.6	52.4	97	33.0	10.0	4

1/ Unofficial

2/ 14% Moisture Basis

3/ Purified

4/ Below 80 color score not acceptable, normally; however, due to the excellent color this crop year, the minimum score is 88.

5/ 1 - No Promise, 2 - Little Promise, 3 - Some Promise, 4 - Good Promise.





# QUALITY DATA ON UNIFORM REGIONAL DURUM WHEAT NURSERY SAMPLES

1971 CROP

[illegible]







